

AMERICAN VETERINARY REVIEW.

JANUARY, 1899.

All communications for publication or in reference thereto should be addressed to Prof. Roscoe R. Bell, Seventh Ave. & Union St., Borough of Brooklyn, New York City.

EDITORIAL.

NEW YORK CITY GETS "A.V.M.A." MEETING OF 1899.

The Executive Committee of the American Veterinary Medical Association has decided that the best interests of the members and the profession will be subserved by the selection of Gotham as the place for holding the annual convention of the last year of the nineteenth century. It is peculiarly fitting that the first meeting of the new association should be held in the same city where, thirty-six years before, its predecessor, the United States Veterinary Medical Association, was organized, and sent forth upon a career which has been a glorious succession of triumphs in moulding the character of a profession which now claims its position among the advanced sciences of this age.

Starting under such favorable auspices, much more will be expected of the one which will be called to order in the same city next September, and we have not the least doubt but that when the record shall be opened in thirty-six years hence the splendors of grand achievements will meet the eye upon every page.

Next September should and will be a red letter day in veterinary matters in North America, for during the second week in that month a number of important veterinary gatherings will occur in the same city, bringing together veterinarians from all over the country. This is the list:

- (1) American Veterinary Medical Association.
- (2) New York State Veterinary Medical Society.

*I have an application in for a position
as a college at Manhattan Kansas
Will you please forward me it.*

- (3) Veterinary Medical Association of New York County.
- (4) United States Experiment Station Veterinary Association.
- (5) Association of Veterinary Faculties and Examining Boards of North America.
- (6) American Veterinary College Alumni Association—Silver Anniversary.

With such an array of interesting events it is no exaggeration to state that we are upon the threshold of a veterinary jubilee, the equal of which has never been contemplated in America. Aside from this the delegates to the Seventh International Congress of Veterinary Surgeons at Baden-Baden will just be able to reach New York in time to participate in the multiple attractions above set forth.

That New York will open wide her doors of hospitality to the profession of the country is already assured, for the County Association extended a unanimous invitation to come, and that body of earnest associationists stand ready to give all a hearty welcome. A strong local committee of workers will be named; and nothing will be left undone to make the greeting worthy of the occasion.

The clinical feature inaugurated at Omaha should reach its perfection in New York, and the pathological exhibit can be greatly enlarged upon, profiting by the experience of last year.

Veterinarians from the West are asked to travel a long distance, but the galaxy of events will be so attractive that they may feel well repaid for the journey, and there is every prospect that the East will reciprocate in the following year by going back to the land where in 1898 they were received with open arms and hearts.

SEVENTH INTERNATIONAL CONGRESS OF VETERINARY SURGEONS.

In a previous issue of the REVIEW, our readers were made acquainted with the announcement of this important gathering.

Since
one of
earnest
to the
The pl
where i
by the
can be
pire an
large su
scribers

In t
priety o
informa
pend up
tant tha
veterina
tion to
societies
counting
authorize
all infor
insure m
will be
of 100 E

And i
the work
be no d
United S
We feel c
our nume
readers to
relations
ists and st
is taken i
are to be c

Since that date other communications have been received and one of them is presented to our colleagues, and their attention earnestly called to the importance of the Congress, as well as to the value of the subjects which will occupy its sittings. The plan presented in the circular, which will be found elsewhere in our pages, tells of the great effort which is being made by the committee of organization to make the occasion all that can be desired. The general government of the German Empire and that of the city of Baden-Baden have already granted large sums of money for the Congress, and a long list of subscribers is now on hand.

In the present circular a suggestion is made as to the propriety of forming an American sub-committee and asking for information as to its expediency. The answer to this will depend upon the number of American adherents, and it is important that this should be in goodly proportion to the number of veterinarians in North America. No doubt a good representation to the Congress is imposed upon our colleges, our State societies, and, above all, from our National Association, without counting the Bureau of Animal Industry. The REVIEW is authorized to receive subscriptions, and will be ready to give all information that may be desired. A check for \$3 will insure membership, with a copy of all the transactions, which will be issued in French, German and English, if the number of 100 English and American subscribers is reached.

And it is not only veterinarians who will be interested in the work of the Congress, but also agriculturists, and there can be no doubt that the great agricultural community of the United States will be represented at Baden-Baden next August. We feel confident that through their publications the editors of our numerous agricultural papers will call the attention of their readers to the importance of the Congress and of the intimate relations that exist between its work and that of agriculturists and stock raisers, and the benefits they will derive when it is taken into consideration that so many days of the meeting are to be devoted to the discussions which must interest them

—such as: measures against the spread of epidemic diseases, encouragement of international trade; tuberculosis, foot-and-mouth disease, swine fever, etc.

But a few months ago the veterinary word was "On to Omaha." May we call now for that of "On to Baden-Baden?"

THE WASHINGTON HUMANE SOCIETY.

If ever a sect or association labored under an incubus of fanatical ignorance and prejudice, the American Humane Association is the one of most prominent distinction, and the incubus is its local society located in the District of Columbia, whose recent action should expose it to the ridicule of all men, and result in its gradual but certain disintegration, and its place taken by some other organization with brains and humanity instead of a narrow-minded, imbecilical, hypocritical conglomeration of long-eared fanatics, who cannot spare sufficient brains from the function of feeding themselves to grapple with an idea larger than a pea. This local society is father and mother of the Antivivisection Bill, which has been before Congress as a menace to scientific progress for a number of sessions, and they regard every living being who cannot curtail himself within its narrow cloak and become an advocate of that foolish emanation of a lot of cranks, as an enemy of society and one to be looked down upon from their lofty heights of morality. The American Association met in the Capitol City in December, and in seeking papers to be read at that meeting the Chairman of its Sub-Executive Committee wrote to Secretary Wilson, and solicited a contribution from Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, and expressing the greatest pleasure and satisfaction when informed that the Department of Agriculture would co-operate with them. Dr. Salmon announced his subject as follows: "Diseases and Abuses of Animals in the United States: what is being done by the Federal Government toward their alleviation and prevention, and what the Humane Societies of the country may do to assist in these efforts." When everything had been thus settled, and the distinguished head of

the B
subje
dresse
Washi
gramm
there
writer
regrett
consider
of repl
of the
append

U. S. DE
D. C.
Mr. Jam
Hum

My
and I as
ment o
Washing
of a pa
I was to
in case t
which th
one man
favor, sh
to them
The
to secure
for the a
hope the
operation
the coun
biologists
the Gove
mentation
slowly lea
diseases
Bureau ha
500,000 d

the Bureau had prepared a careful and valuable paper upon the subject, the Secretary of the American Association again addressed a letter to the Bureau Chief saying that when the Washington society found Dr. Salmon's name upon the programme it went into hysterics and asserted that if it remained there all interest in the meeting would be suspended. The writer proclaimed innocence of any responsibility for this action, regretted the circumstance, and assured him of distinguished consideration by the American Association. Dr. Salmon's letter of reply is so full of wisdom and is such a complete exposition of the ridiculous position of the Washington Society that we append it in full:

U. S. DEPARTMENT OF AGRICULTURE, BUREAU OF ANIMAL INDUSTRY, WASHINGTON, D. C., November 29, 1898.

Mr. James M. Brown, Chairman Sub-Executive Committee, The American Humane Association, 405 Gardner Building, Toledo, Ohio.

MY DEAR SIR:—Your favor of the 21st instant is received, and I assure you there is no cause for you to feel embarrassment on my account. It is remarkable, however, that the Washington Humane Society should so greatly fear the reading of a paper before your body, upon such a practical subject as I was to present, that it would lose all interest in the meeting in case that part of the programme were carried out. If the cause which they are advocating would be so seriously endangered by one man and one paper, with a convention predisposed in their favor, should not this confession of the fact prove embarrassing to them rather than to any one else?

The Washington Humane Society is making a great effort to secure legislation to stop experimentation upon animals even for the advancement of medical science. In this I sincerely hope they will never succeed; but they are alienating from co-operation with the humane societies the great humane forces of the country, viz., the medical and veterinary professions, the biologists, the universities, and the Agricultural Department of the Government. In the meantime the value of such experimentation is becoming more and more apparent, and we are slowly learning, by means of it, how to control the destructive diseases affecting mankind and the lower animals. This Bureau has distributed upon request of the owners of cattle, 500,000 doses of blackleg vaccine, during the past year, reduc-

ing the loss from about 15 per cent. to 1 per cent. This year we have demonstrated that Texas fever can be prevented without serious restriction to the traffic in southern cattle, and this discovery will save millions of dollars annually to the people of the Southern and Southwestern States and Territories. We are also introducing a serum treatment for hog cholera which saves 80 per cent. of the animals in diseased herds. These discoveries, made by experimenting upon animals, mean not only many millions of dollars to the country, but they mean the cheapening of the food-supply, which is always equivalent to saving human suffering and prolonging human life, and they also mean the prevention of infinite suffering among the species of animals affected by these diseases.

Under these circumstances is it not time for the liberal and intelligent members of the American Humane Association, who joined that organization to prevent cruelty to animals rather than to secure personal notoriety, to stop and consider whether they are called upon to further support and encourage those narrow-minded and intolerant people whose efforts are a hindrance rather than an aid to the cause of humanity?

Assuring you again of my appreciation of your invitation, and of my sympathy with every intelligent effort for lessening the great sum of misery and suffering to which both our own race and the lower animals are subject, I am,

Very sincerely yours,

(Signed)

D. E. SALMON,

Chief of Bureau.

All this association needs is a little more rope, and it will hang itself. *The Philadelphia Medical Journal* for December 10th printed the correspondence in full, together with the excellent paper which Dr. Salmon had prepared, and editorially made the following comment:

"KINDNESS TO ANIMALS, OR HATRED OF SCIENCE, WHICH?—In the transfer of a car-load of animals across the continent, or of a ship-load to Europe, there is a hundred times more suffering, more awful torture, than in all the laboratory-experiments of the whole world since science has existed. Laws exist on the statute books, which, if carried into effect, would do away with these atrocities. In entire frankness we ask what is the conclusion logically necessary from the crusade of the antivivisectionists against scientific investigation? Plainly it

is not
but the
suffering
Antisc
the ze
necessa
that th
in the
all the
are the
though
Dr. Sal
secuted
dead."

The
thus vi
ciation,
Meeting
ports o
far it ap
which v
advise o
flect up
The Na
all the
the mo
guide a
only ob
the grea
tion, we
be not o

OUR
extra on
time pas
have a l

is not pity for suffering that is the dominant motive with them, but the old mediæval hatred of science. If it were horror of suffering the infinitely greater evil would be attacked first. Antiscience is neither ingenuous nor is it logical. A tithe of the zeal expended would eradicate the hideous, illegal, unnecessary torment in the shipment of cattle. We even protest that there is more suffering from the callousness and brutality in the markets and restaurants of one city in one day, than in all the laboratories of the world during the same day. What are the antivivisectionists doing to stop it? What shall be thought of the motives of people who ignore all this and forbid Dr. Salmon to speak to them? The old superstition that persecuted 'heretics,' Galileos, and Quakers, is by no means dead."

A TRANS-MISSISSIPPI ASSOCIATION.

The question of establishing an Association in the West, thus virtually dividing the American Veterinary Medical Association, is being agitated, and in our Department of "Society Meetings" in this issue will be found reference to it in the reports of two State meetings—the Illinois and Missouri. Thus far it appears that only an expression of opinion is asked for, which was in both instances adverse to the proposition. We advise our Western friends to go slowly in this matter, and reflect upon the adage that "United we stand, divided we fall." The National Association needs every member it can secure in all the territory over which its influence can be extended, and the more its arms stretch forth the greater its opportunity to guide and protect the footsteps of the young profession. The only object which the National Association has or can have is the greatest good to the greatest number. A Western association, we fear, will restrict the influence for good of the one, and be not of much advantage to the other.

OUR pages are overrun this month, and a large number of extra ones have been added, just as has been the case for some time past. Our collaborators and correspondents are asked to have a little patience with us if the publication of their valued

literary contributions are delayed. The department of "Society Meetings" in the present number is a perfect reflection of veterinary progress, and is very interesting and valuable reading. When our suggestion to double the REVIEW's circulation by the coöperative plan of each subscriber securing one non-reading colleague to become one also, is an accomplished fact, we will be enabled to enlarge the magazine to accommodate all. Quite a number of subscribers have grasped the idea with alacrity, and one or two have sent in four or five subscriptions for friends. The idea will grow, and the profession will reap the reward.

VETERINARIANS who intend to prepare papers to be presented at the next meeting of the American Veterinary Medical Association, which will be held in New York City, September 5th, 6th, and 7th, 1899, should notify Secretary Stewart, 7½ South James Street, Kansas City, Kansas, of such intention, giving the title of their subject, if possible, at the earliest date.

DR. SALMON, of the Bureau of Animal Industry, has recently contributed some very interesting articles to the *Breeder's Gazette* upon the subject of "Texas Fever Problems." The dissemination of knowledge upon such topics among the progressive breeders of the country will advance our interests materially. It is a step in the right direction, and should be followed by others.

THE term of office of State Veterinarian Pearson, of Pennsylvania, expires with the incoming administration, and there should be a united effort on the part of the profession of the Keystone State to keep him in office, for his tenure of office has been marked by so much intelligent activity as to give promise of the most far-reaching results for the benefit of the live stock interests of the commonwealth, as well as dignity and popularity to the profession which he loves and adorns.

Professor of

An Address

Glan
the equin
two thou
oldest dis
known to
disease o
mitted to
and even
country,
ablest me
world inh
destructio
managem
past and
mains of
the begin
ing from
of medic
century, c
repealed a
by the u
twenty-fiv
affairs in
of mortal
The destr
so great

ORIGINAL ARTICLES.

GLANDERS AND ITS SUPPRESSION.

EXPERIMENTS WITH MALLEIN.

BY DR. J. M. WRIGHT,

Professor of Pathology and Contagious Diseases, McKillip Veterinary College of Chicago, and Assistant State Veterinarian of Illinois.

An Address delivered before the Inter-State Association of Live Stock Sanitary Boards, at Omaha, Nebraska, October 11, 1898.

Glanders is one of the oldest diseases on record to which the equine race is heir. We find descriptions of it given over two thousand three hundred years ago. While it is one of the oldest diseases, it is the most loathsome, contagious and dreaded known to generations past and present. It is essentially a disease of the equine race, but by inoculation can be transmitted to other animals. For example, guinea-pigs, field mice and even men. Once introduced into a province, state or country, it has remained, notwithstanding the efforts of the ablest men of the age. It exists to-day in every part of the world inhabited by the horse, mule or ass. It causes greater destruction in warm countries than in cold, even with the same management and care of the animals. All countries in all ages, past and present, have made desperate efforts to rid their domains of the scourge. There have been repeated attempts from the beginning down to the present time to cure animals suffering from the malady by good management and the application of medicines. The French, at the beginning of the present century, came to the conclusion that it was not contagious and repealed all police sanitary laws and attempted to stamp it out by the use of medicine. Note what followed: in less than twenty-five years there was a most deplorable condition of affairs in every part of the French Republic. The percentage of mortality increased from a minimum to a high rate per cent. The destruction of property and the loss of human life became so great that before many years had passed they established

new police sanitary laws and enforced them with greater vigilance than ever before. This had the desired effect of lessening the percentage of mortality.

I personally know of numerous instances where effort has been made to effect cures by aid of therapeutical agents in this country: one instance where barns were secured outside the city and many glandered patients taken for treatment. Such efforts were ineffectual, as they never returned a single horse cured. Horses had been treated in another barn for two years until, as a State officer, I discovered them and what was going on. I took possession of the premises. The owner had never owned more than four horses at any one time, but during the period that they were treated he lost eleven diseased with glanders. When I took possession of the place, I found three horses in the barn; one a large sorrel horse so badly diseased with farcy and glanders that he could scarcely walk; one large bay horse almost as badly diseased, and one gray horse, which he had owned for years, was in good condition and at first sight would be regarded as in a perfect state of health. Upon closer examination he was found to have glanders in the chronic form. It is needless to say that I destroyed them all. I could relate many similar instances just as provoking as the above, but time will not permit.

Attempts have been made in the West to effect cures by turning glandered horses out on the ranges. If this were done in Colorado, Wyoming, Montana and Dakota, when the weather is fine, in the summer months, the animals would gain in flesh and many of the symptoms would become modified or disappear, but when feed becomes scanty in the fall and cold rains, sleet and snow, and blizzards with their chilly blasts come, the disease would assume the acute form and the animals would die in great numbers. Some of the stronger ones would, perhaps, live through the winter and with the return of spring, its fine weather, and plenty of food, they would improve and continue in the chronic form, spreading the seeds of contagion.

Nasal discharges and farcy are only manifestations of gener-

alized or
afflicted
without
the above
ally destr
it in the
commun
apparent
periodica
escape m
continue
until som
Should t
with cata
tate the
us to det
fected in
examina
aid us.

Aided
have fou
posed ar
with abs
ninety-fiv
or liver o
more tha
passages

Mode
these var
mals, the
the seaso
rubbing
charge, o
troughs,
contents
the nostr

alized or systemic glanders in ninety per cent. of the animals afflicted with the disease. All such animals should be destroyed without question. It is not the animals that have the disease in the above forms which are to be most dreaded, for they are usually destroyed as soon as discovered, but it is the animals having it in the occult form which spread the seeds of contagion in the community when it is once planted there. Some will remain in apparent health for months and years, and have only slight periodical discharges from the nostrils, and often so slight as to escape notice. Others will not even have such discharge, but continue in apparently perfect health for months and years, or until some debilitating influence is brought to bear upon them. Should they suffer from exposure, be poorly fed, or be attacked with catarrh, influenza, pleurisy or pneumonia, it would precipitate the disease into an acute form very quickly. It behooves us to detect all animals which have been exposed, and are infected in an incipient form. As this cannot be done by physical examination, we must cast about for some element or agent to aid us.

Aided by mallein, and following its use by post-mortems, I have found that on an average forty per cent. of all animals exposed are actually infected with glanders in its incipient form, with absolutely no external manifestations of the disease; in ninety-five per cent. the lesions will be found only in the lungs, or liver or mesenteric lymphatics, or in all three of them; in not more than one per cent. will there be lesions in the upper air passages or in the larger bronchial tubes.

Mode of Invasion.—The modes of invasion are many, and these vary according to circumstances and condition of the animals, the state of the sanitary surroundings, the climate and the season of the year. An animal may become infected by rubbing its nose against the nose of one with a profuse discharge, or in like manner from the walls of the stall, feed-troughs, mangers, etc. It can be produced by rubbing the contents of a glanderous ulcer, tubercle, or the discharge from the nostrils on a mucous membrane, or on the skin where there

are no abrasions, but if it be applied to the latter it must be well rubbed in. Infection may take place in the mouth and alimentary canal, through wounds or abrasions, when obtained from bridle bits, hitching posts, walls of the stall, manger feed troughs, or from infected feeds, such as grain, hay or straw. I feel safe, however, in saying that less than ten per cent. of all cases of infection take place in the above described manner. When it does occur there will invariably be at first a localized lesion, which will spread by means of the lymphatics into the surrounding parts, which will extend farther and farther until it becomes general. The common watering trough is the place where animals become infected in a majority of cases. A horse is watered one or more times each day, when his stomach is empty and he is thirsty. Usually under such circumstances he will ingest large quantities, which pass at once from the stomach into the intestinal tract, where it is absorbed almost immediately by two sets of absorbents:

First, the portal circulation, which carries this infected matter and pours it into the liver, where it for the first time has to pass through a capillary system, and where the bacilli have their first opportunity to escape from the vessels and gain entrance into the tissue spaces and lymphatic vessels, where they produce their characteristic lesions. Those which fail to escape are emptied into the posterior vena cava and the next capillary system they pass through is in the lungs, where they again have the same opportunity as when they passed through the liver.

Second, the mesenteric lymphatic system, which collects and pours its contents into the anterior vena cava through the thoracic duct. The infected material having thus found its way into the venous circulation, quickly finds its way into the lungs, where it for the first time passes through a capillary system and the bacilli have an opportunity to escape into the tissue spaces. It will be noticed that the early primary lesions are in the parenchyma of the lungs and not in the bronchial tubes, which explodes the inhalation theory.

Farcy

various glanders membrane or to the per cent. ing from general a ity of the cape from smaller into these a longer opportunity and prod and deve would be ment by of the bo if they w

Malle

by making ture med making d it to fail on more been exp value as at all sea generaliz of pneum cases of fourteen c suppuration hoof to th of farcy.

Farcy.—Farcy may be produced by cutaneous infection in various ways, such as wounds, abrasions, hypodermically and by glanderous material being placed upon the skin or mucous membrane. If on the skin it will be necessary to apply friction, or to thoroughly rub it into the openings of the same. Ninety per cent. of all cases of farcy are produced by the bacilli escaping from the lungs or through them, gaining entrance into the general arterial circulation, in which it is carried to the extremity of the artery, into the capillary system, where the bacilli escape from these small vessels into the small tissue spaces and smaller lymphatics. When they have once gained entrance into these tissue spaces they are permitted to remain at rest for a longer or shorter period of time, thus giving them ample opportunity (if not destroyed by nature's elements) to multiply and produce their characteristic lesions. And if such lodgment and development should be near the surface of the body there would be manifest farcy buds. I am supported in this statement by the fact that farcy buds may be seen on different parts of the body almost simultaneously, which would not take place if they were produced by cutaneous infection.

Mallein was first produced by Kalning, Preusse and Pearson, by making a culture of the bacilli of glanders in the proper culture media. I consider it of great value as an assisting agent in making diagnoses in occult cases. In fact, I have never known it to fail in the work for which it is intended. I have used it on more than two thousand horses, which were diseased or had been exposed. I have used mallein experimentally to test its value as a diagnostic agent on 138 healthy horses, of all ages, at all seasons of the year. On six horses with well marked generalized melanosis, thirteen cases of pleurisy, sixteen cases of pneumonia, three cases of pleuro-pneumonia, twenty-four cases of influenza, three cases of purpura hæmorrhagica and fourteen cases of lymphangitis, two of which were in a state of suppuration; *i. e.*, having numerous little abscesses from the hoof to the stifle, resembling very much the buttons and ulcers of farcy. None of these animals showed the slightest degree of

reaction, either by causing an elevation of temperature or any systemic disturbance. The use of mallein as an agent in ascertaining the animals which contain the bacilli cannot be extolled too highly. I would recommend its use in all doubtful cases and on all horses, mules or asses that have been exposed to glanders.

To use mallein intelligently one must, in the first place, be sure that he has a good quality of the agent, and in making the test I would recommend the following method :

The first mallein test should not be given earlier than ten days after the last glandered animal has been destroyed, nor later than three weeks, and the premises in the meantime should be thoroughly cleaned and disinfected. I have observed if the test be given immediately after the last glandered horse has been destroyed, that some will not react, but will do so later at a second test. Such a thing will rarely occur if two weeks are allowed to elapse after the last glandered animal is destroyed before giving the test. The test should cover a period of two days, and the first day the temperatures of the animals should be taken at 6 A. M., again at 12 M. and again at 6 P. M., to ascertain their normal temperatures. At 9 P. M. proceed to give the injection with a hypodermic syringe in the following manner: First thoroughly sterilize the skin on the cervical region beneath the mane, with a strong antiseptic. Then burn the hypodermic needle in the flame of an alcohol lamp, load it with $2\frac{1}{2}$ c.c. of mallein and inject beneath the skin at the point indicated in the cervical region. Great care should be exercised in using the hypodermic needle. It should be used but for one animal, or be thoroughly sterilized in the flame of an alcohol lamp before each injection, as neglect in this particular may result in the transmission of the disease from one animal to another.

On the second day the temperature should be taken at 6 A. M., 9 A. M., 12 M., 3 P. M., 6 P. M., and at 9 P. M., which completes the test. Great care should be exercised in taking the temperature from 6 A. M. to 9 P. M., for the simple reason

that some
I have in
the slight
had passed
of this t
the distur
fourth da
ate gland

In a
have not
twenty, t
all experi
a period

All a
or more c
of injecti
and depre

All an
more deg
of injecti
appetite a
perature,
under qu
once each
should be
work, but
this perio
animals s
and those
All anim
from quan

The U
by some v
ders. Is
nature ha
As I have

that some of the animals may not react until late in the day. I have in one instance observed an animal that did not show the slightest disturbance until twenty-three and a half hours had passed after the injection of mallein, and at the expiration of this time he commenced to react to an extreme degree, and the disturbance was so great that he died at the end of the fourth day. Post-mortem showed the lungs to be in a desperate glanderous condition, with the liver badly affected.

In a number of instances I have observed that the animals have not shown any indication of reaction until eighteen, twenty, twenty-one and twenty-two hours have passed, while all experimenters know the reaction will usually be manifest at a period ranging from eight to fifteen hours.

All animals that show an elevation of temperature of four or more degrees, have a large and painful swelling at the point of injection, excessive systemic disturbance, loss of appetite and depression, should be destroyed at once.

All animals showing an elevation of temperature of two or more degrees, with a moderate amount of swelling at the point of injection, no noticeable amount of depression, no loss of appetite and systemic disturbance, except the elevation of temperature, should be isolated and kept from all other horses, under quarantine for from three to six months and inspected once each week by a competent veterinary surgeon. They should be out in the open air and sunshine, with moderate work, but never enough to produce exhaustion; at the end of this period they should be given another mallein test. All animals showing reaction at the last test should be destroyed, and those which do not should be released from quarantine. All animals not showing reaction at first test can be released from quarantine as healthy.

The Use of Mallein as a Therapeutic Agent.—It is claimed by some very eminent men that mallein will cure occult glanders. Is it not possible mallein is given credit for doing what nature has done? Let us look at the question for a moment. As I have already said, an average of forty per cent. of all ani-

mals exposed are infected with the virus of glanders. If these be kept at moderate work, out in the open air and sunshine and be housed in pure, clean, well-ventilated barns with plenty of good, pure water and nourishing food, less than five per cent. of the forty per cent. will develop into clinical glanders, but will become free of the infection. In such cases if mallein were used it would be given the credit.

I have been unable, by the use of mallein as a therapeutical agent, to determine the percentage of developments into clinical cases, or to diminish the number of mortalities, although I have noticed emaciated animals, after its use, apparently improve in flesh, and occasionally they will continue to improve for three, four and five months, and then develop into clinical cases of glanders. I have given doses every seven days, but found that after four or five doses there would be no reaction, as far as elevation of temperature is concerned, but a part of them would develop into clinical cases. I have tried to accomplish the desired end by giving a dose every thirty days, and with others every sixty days, but the results were negative and some of them would develop into clinical cases. In all these animals the treatment was the same as that given those which slightly reacted from the test.

Taking all these facts into consideration, I do not feel justified in recommending the use of mallein as a curative agent, except experimentally, fearing that inexperienced persons may release animals from quarantine that should be held.

Sanitation.—Before beginning the fight with this enemy it will be well for us to have some knowledge of its power of resistance. First, we find the true cause of this disease is a bacillus, slightly shorter and decidedly thicker than the bacillus of tuberculosis, rounded at the ends and slightly curved upon itself. It can be cultured in various culture media. Outside the body it will develop in the proper media at a temperature above 68° F. and below 113° F. At a temperature above 113° F. or below 68° F. its growth is arrested and it soon perishes. It is destroyed in a temperature of 145° F. in ten minutes, and in a

temperatur
it will res
3-per cent
utes, a 1-P
minutes,
utes. It i
in water a
sist putref
in distilled
very quick

After
by the dis
loose mat
feed troug
scrubbed
thoroughl
and dried
advise res
potash, 1
solution o
mentioned
be scrubbe
ness, bridl
solution o

A field
perfectly f
ninety day
fall or win
perature.
under qua
where it i
period.

THE C
stock pap
excellence
zealously

temperature of 176° F. in five minutes. If it should be in water it will resist the excessive heat longer than in a dry state. A 3-per cent. solution of carbolic acid will destroy it in five minutes, a 1-per cent. solution of permanganate of potash in two minutes, and 1 to 5000 of bichloride of mercury in two minutes. It is destroyed by desiccation in one week. It will live in water above 80° F. from fifteen to twenty days. It will resist putrefaction from fifteen to twenty-four days. It will live in distilled water six days. A low temperature will destroy it very quickly.

After the removal or destruction of the last animal affected by the disease, I would recommend removal and burning of all loose material, such as refuse, hay, bedding, etc. Water and feed troughs and stalls of the stable should be thoroughly scrubbed with a broom and boiling water for the purpose of thoroughly destroying all material which may have accumulated and dried there. To make the cleansing more complete I would advise rescrubbing with 1-per cent. solution of permanganate of potash, 1 to 5000 solution of bichloride of mercury or 3-per cent. solution of carbolic acid, after which whitewash all the above-mentioned places. The wagon tongue and neck yoke should be scrubbed and washed with one of these solutions. All harness, bridles, bridle bits, etc., should be thoroughly washed in a solution of permanganate of potash and oiled.

A field, pasture, stream of water, stable or barn will become perfectly free from the bacillus in summer time in less than ninety days, without any treatment, and in a week or less in fall or winter, the time varying according to variations in temperature. It is absolutely unnecessary to hold any premises under quarantine, where the animals have been removed and where it is impracticable to properly disinfect them, for a longer period.

THE Christmas number of that valuable agricultural and stock paper, the *Breeder's Gazette*, is a perfect gem of artistic excellence, and is worthy of the vast interests which it is so zealously represents and labors for.

A NEW METHOD OF EMPLOYING CHARCOAL IN THE TREATMENT OF ACUTE INDIGESTION IN HORSES.

BY GEORGE J. GOUBEAUD, D. V. S., BROOKLYN, N. Y.

Read before the December Meeting of the Veterinary Medical Association of New York County.

Upon request of one of your honored members, I have the pleasure of presenting for your consideration a subject entitled "A New Method of Administering Charcoal for the Relief of Gaseous Distention in Acute Gastric and Gastro-Intestinal Indigestion." During the past two years it has fallen to my lot to treat a large number of horses suffering from this form of colic by this method, and have secured much success, results being obtained that could not possibly be had under the old method of administering charcoal; indeed, I might state that it was the principal agent I relied upon.

We all know how serious is the condition of the animal that presents itself to us suffering from this affection; abdomen distended to an enormous degree, although at times when the stomach alone is involved the distention will not be so noticeable, eructating gas as rapidly as the abnormally distended and half-paralyzed stomach will permit. The sound of the gas forcing itself up the œsophagus can be heard several feet distant, mouth dribbling saliva, which the animal attempts to swallow, but is successful only after several ineffectual efforts; little or no gas escaping per rectum, although it strains in its efforts to force it out; peristalsis diminished and in some cases absolutely no movement of the intestines can be heard; respiration quick and short; pulse usually soft and compressible and numbering sixty to eighty per minute; mucous membranes cyanosed, due to pressure of the distended intestines upon the lungs, thereby retarding proper oxidation; body swaying from side to side, trembling or shivering of the muscles of the flank and elbow, skin covered with a cold sweat, unable to stand and still unable to lie in the recumbent position, and an anxious countenance. We know in cases of this kind that active and energetic measures must be

employed
cumulation
the gases
powerful

The
demands
be prompt
know that
with a fa
the intest
tion will
been per
to either
which ha
those gen
tion, and
absorption

While
my learn
that were
ternally
in acute
that char
same sta
materia
coal abso
have sai
many ba
did they
tended, c
tively di
results a
they tre
tured eve
I em
ever resu

employed to stop fermentation, thus preventing gaseous accumulation, and the next step is to rid the intestinal organs of the gases that have already formed by expulsion by means of powerful cathartics, enterotomy or absorption.

The foregoing is a picture of a case of indigestion that demands active and energetic treatment. Medication that will be prompt, rapid, effectual, positive and reliable in results. We know that the animal's condition demands such treatment and with a failure to employ it how liable the stomach is or some of the intestines to rupture and an almost necessarily fatal termination will be the result. Our first thought after enterotomy has been performed, that is if we find such a procedure necessary, is to either stop or prevent fermentation and to absorb the gases which have already formed. Holding views at variance with those generally accepted concerning the prevention of fermentation, and since the only object of this paper is to deal with the absorption of gases, I will proceed with the subject proper.

While attending college I listened more or less attentively to my learned and honored professors eulogize the beneficial results that were to be obtained by the use of charcoal when given internally for the relief of gaseous distention due to fermentation in acute gastric and gastro-intestinal indigestion. We were told that charcoal absorbed several times its weight of gas, and the same statement is made by some of our standard authors on materia medica and chemistry; and, again, others say that charcoal absorbs fifteen times its weight of gas. Now, while all they have said may be true, still I do not think they treated very many bad cases of acute indigestion with good results; if they did they treated a different class of horses from those which I attended, or they used charcoal that had effects and results positively dissimilar to that which I employed. If they had good results and employed the treatment such as they told us then, they treated horses whose intestinal organs could not be ruptured even by a modern ram.

I employed charcoal, first vegetable, then animal, and whatever results were to be obtained by the use of the former, still I

did not then nor do I now, unless under certain conditions, believe that animal charcoal has the same absorbing powers that vegetable charcoal possesses. I gave it dry in powdered state, in capsule form, and I gave as much as three pounds to one animal with no effect. Now, gentlemen, I had positively and absolutely no results. The only result I did get I would have obtained had I not used charcoal at all. When I did not give it I had cases recover and they seemed to be extremely bad cases—animals that I thought would die. They presented all the symptoms of an aggravated attack, an attack which apparently would lead to a fatal termination, and still they would recover. Then, again, other cases which would not appear so bad would terminate fatally. Now, identically the same can be said of those cases which I treated with charcoal. Cases died which would have recovered had the charcoal possessed the powers with which it was credited. No fatal symptoms nor fatal complications had presented themselves until two and three hours had elapsed after charcoal had been administered. If charcoal had performed its proper action, why did my cases, not those that had lesions other than those of rupture, present lesions of rupture upon post-mortem examination, if charcoal had performed the action which was ascribed to it? If charcoal absorbed several times its weight of gas and my patient died after having received two pounds of it, then that which I gave must have been hoodood. I do not know just now how much volume is in an ounce of gas, but I do know that it is considerable. Now, if charcoal such as we prescribe will absorb several times its weight of gas, then sixteen ounces of charcoal will absorb, to make it small, three times as much or 48 ounces of gas; or, still further, if 3 pounds of charcoal will absorb fifteen times its weight of gas and still both horses die due to shock from ruptured stomachs, then something must be wrong somewhere.

Two cases in particular proved to me the inefficiency of charcoal when employed as an absorbent in the manner in which it is usually administered, and I hope to be pardoned for

entering in
He had be
corn; fro
treatment
much agai
him charc
Some idea
that it req
last time
operation.
the progre
missed me
gave him
of ammon
examination
tion of the
sented an
only struc
lived long
ture woul
by a phys
him charc
although
gave the
attack of
Death occ
other trea
gave him
confess I
tem exam
over its g
from righ
tact was
uselessne
which it
to all app

entering into them in detail. One was an aged trotting horse. He had become unfastened and eaten one half bushel of green corn; from the time of sickness to the period of beginning treatment was about forty minutes. I tapped him immediately, much against the owner's wishes. As other treatment I gave him charcoal; the amount which he received was two pounds. Some idea of the severity of the attack can be had when I state that it required about two hours to give him this quantity. The last time I tapped him as much gas escaped as at the first operation. The owner became dissatisfied and so was I at the progress his horse was making. He unceremoniously dismissed me, another veterinarian was called, who immediately gave him linseed oil one quart, chloroform $\frac{3}{4}$ iii, aromatic spirits of ammonia $\frac{3}{4}$ iii; result, death one hour after. Post-mortem examination, pulmonary medication too heroic; the major portion of the drench was in the bronchial tubes; stomach presented an incomplete rupture; the gastric peritoneum was the only structure which held the organ intact and had the animal lived long enough I have every reason to believe that the rupture would have been complete. The second case was owned by a physician and I think it was for that reason that I gave him charcoal. He was a believer in the efficacy of it; I was not, although I gave it. On account of working hard the groom gave the horse a double quantity of oats. He developed an attack of acute gastric indigestion one half hour afterwards. Death occurred five hours after developing the attack. With other treatment which I considered appropriate at the time I gave him one pound and a half of vegetable charcoal. I must confess I saw positively no effect from its use. The post-mortem examination revealed a complete rupture of the stomach over its greater curvature about eight inches long and running from right to left. That part of the organ which remained intact was empty. This result has convinced the owner of the uselessness of charcoal when administered in the manner in which it was. I might add that since then I had a case which to all appearances was as bad as the last mentioned, owned by

the same gentleman, caused in the same way, but treated differently, which did not terminate fatally. I think that I can safely state that the owner's opinion of charcoal has changed considerably. Still, I have heard prominent and successful practitioners say that they had cases in which the gas generated as rapidly as it was absorbed by the charcoal.

Practitioners that have employed hundreds of pounds in practice, gentlemen who are shrewd observers, careful, conservative and conscientious, would have me believe that a horse would generate three times as much gas as charcoal would absorb. Others that it would during fermentation evolve fifteen times as much gas as would charcoal by its affinity take to itself. If these things be true the deductions would be as follows: A horse would be an animated gas reservoir, a walking, rolling, kicking and struggling gas generator, an honest and faithful gas tank. I could not understand these things, I was either badly twisted or they were wrong. The authorities either knew that charcoal does not, would not and could not absorb gases under certain conditions, and failed to state the fact, for I have not found it stated in all the works which I have read on the subject, or they simply wished to have us find the reason why.

Charcoal by its selective affinity and its powers to absorb gases is described as an absorbent. It will by that power which it possesses and which is inherent in itself perform this action; it will absorb gas; it is one of the best absorbents of gas that is known. But there are conditions or states in which charcoal can be and is absolutely useless as an absorbent, and I think I can prove to your satisfaction that charcoal as we give it is positively useless, and can have no absorbing power whatever. It simply and positively has no absorbing power.

Charcoal is not very obliging, it does not wait for us to employ it and then perform its chemical action, it is not automatic, we must do more than press the button. We must heat it, we must drive off all those gases which it has already absorbed before any benefit can be derived from its use. The arguments

sustaining
leaves it,
placed in
which, pla
manufactu
one year.
or perhaps
secluded c
it can be e
necessary,
the box on
return. I

Now f
employe
gases that
contact wi
healthy at
atmospher
they be ha
its manufa
charged w
the surrou
gaseous el
gaseous d
gases, for
if it is pro
perform i
to our rel
surprising
that if o
distention

I coul
astonishi
but we m
gases tha
the charc

sustaining my contention are these, that charcoal after the heat leaves it, is stored away until needed. It is then powdered, placed in bottle, tin or paper boxes, it makes no difference which, placed in stock until called for. From the time of manufacture to the time of use it may be from one month to one year. We place it in bottles or in our medicine drawers, or perhaps we leave it in its original package, lay it aside in a secluded corner, usually on the floor of our medicine case so that it can be easily reached and still out of the way. Whenever necessary, we take as much as we wish, rush off, usually leaving the box or whatever receptacle it is kept in uncovered until we return. In due time it is placed away for future use.

Now from the time of its manufacture to the time of its employment there is no reason why it will not absorb whatever gases that there are in the surrounding atmosphere it comes in contact with, and if it does not absorb gases that are in an unhealthy atmosphere, it will absorb gases that are in a normal atmosphere, and irrespective of the quality of the gases, whether they be harmless or injurious. The charcoal from the period of its manufacture to the time of its employment has been so surcharged with gaseous matters, supersaturated as it were with the surrounding atmospheric constituents, extra laden with the gaseous elements, that when it is administered for the relief of gaseous distention it cannot, it will not and it does not absorb gases, for the reasons which I have stated, but it will absorb gas if it is properly prepared before employment. It will positively perform its proper chemical action, it will most assuredly come to our relief, and I can honestly state that I have had the most surprising and gratifying results from its use, and I can still add that if our patient has not developed some fatal lesions due to distention our case will terminate favorably.

I could recite case after case in which the results were most astonishing. The action of it was rapid, effectual and positive, but we must first do one thing and that is to drive off all those gases that are in the charcoal. We can do that by heat. Heat the charcoal and when it is sufficiently cool to handle place in

capsules as quickly as possible and give immediately. The quantity which I usually give is four ounces. A very neat way to give it and also to have it ready for immediate use is to heat the charcoal until red hot, fill capsules, cover them, place in wide-mouthed bottles, cover tops of capsules with cotton so as to prevent caps from coming off while being carried, cork bottles securely, seal with wax and store away in a dry place for future use. The bottle must be hermetically sealed.

To those wishing to prove for themselves the correctness of my views by a personal comparison and practical test, I will simply state that if they will collect any gas in a glass retort, place a piece of charcoal in the retort and note the result, I doubt little if any gas will be absorbed by the charcoal, the amount depending upon the freshness of the charcoal; now heat the same piece of charcoal, place in the retort with gas and note the result. I hardly think any gas will remain in the retort. I have experimented further, but this experiment will be sufficient to establish my claim. It is not only necessary for us to heat the charcoal until it is too hot to handle, we *must* heat it till *red* hot, allow time to sufficiently cool, place in capsules, cork them, and in a very short time the internal heat will pass off so that it can be given. Still, if it were possible for us to give it in the red-hot state the action would be still more positive and rapid, for in the cooling the charcoal will absorb the gases that are in a normal atmosphere as well as in an abnormal atmosphere. The object in heating it is to drive off all those gases that are in the charcoal so that it will be as devoid of gaseous matters as it is possible to have it. It makes no difference what the gases are that are in it, for the less gas it has in its structure the more will it absorb, and *vice versa*. However, I do not think it advisable for us to administer it in the red-hot state, especially if the owner be present and our case terminate fatally, for the capsule might dissolve in the pharynx and with expiration the animal will exhale sparks of fire, and if the latter takes place the probabilities are that we would have to defend a suit for damages.

ADVANT

Read be

A ver
cerning h
whom he
culties; a
If a laym
doubtful
tions, not
hend it, n
value. Q
with vete
giving an
in his ch

It is n
his own t
capabiliti
not perfor
another s
his ideas
other city
that he
would pr
ing the m
neighbor
topics ve
abilities,
are neith
most eru
been all
It is
alone pos
munity,

ADVANTAGES OF ACTIVE MEMBERSHIP IN A VETERINARY ASSOCIATION.

BY DR. S. STEWART, KANSAS CITY, KANSAS.

Read before the Missouri Valley Veterinary Medical Association, Oct. 5, 1898.

A veterinarian naturally communicates his thoughts concerning his professional labors to some one or more persons with whom he mingles, detailing his successes, discoveries and difficulties; also accepts and applies suggestions from such persons. If a layman rather than a veterinarian be such confidant, it is doubtful that he will be greatly benefited by such communications, not having the needful professional training to comprehend it, nor are his suggestions likely to have much professional value. Quite different must be the results if this converse be with veterinarians. Association supplies the opportunities for giving and receiving that knowledge which makes one strong in his chosen profession.

It is rarely indeed that a man is found who rightly estimates his own talents. If he be a pessimist he will mistrust that his capabilities are not sufficient to render good service, that he cannot perform a surgical operation as successfully and as deftly as another surgeon with whom he competes, that he cannot state his ideas as clearly and as intelligently as his colleague in another city. On the other hand, the optimist is wont to conclude that he has accomplished wondrous successes where others would probably have failed, and what he does not know concerning the medical or surgical art is not to be learned from his neighbor. By association for the discussion of professional topics veterinarians find opportunity to discover each his own abilities, as well as that of others. Each finds that his talents are neither so mean nor so great that he cannot both teach the most erudite and learn from those whose opportunities have not been all they may have desired.

It is very helpful to most men to learn that they do not alone possess the sum total of veterinary wisdom in their community, while the overmodest and timid are materially strength-

ened upon finding that their knowledge or method is meritorious and compares favorably with that of others. While each discovers in part his own shortcomings he learns that his associate veterinarians are very human, just like himself, having much to learn yet something to contribute to the mutual advancement of all.

That our beloved profession is in an active, growing state must be patent to every veterinarian, and if he would keep apace he must utilize every facility for acquiring information, not the least valuable of which (I believe the most valuable) is the veterinary association. None of us have time to observe everything, test every remedy, study out and determine every disease or condition. Each may make some observations of professional value, determine the efficiency of some special medicament or plan of treatment, discover the cause and nature of some disease, and by communicating what he has learned to his associates he contributes to the knowledge of others to their mutual advantage. If his contribution be supplied to the veterinary journals for publication the profession at large is benefitted.

If it happens that one's observations are incomplete or one's methods of investigation faulty, and wrong conclusions deduced, he may be set aright through friendly criticism of his methods or deductions, by those associated with him and who will extend personal interest and sympathy in his efforts to arrive at the more complete understanding of the subject of his study. Let me illustrate this point: We may have read in the journals or heard some veterinarian say that it now seems probable that the very common, yet intractable disease of cattle generally known as milk fever or parturient apoplexy, is dependent upon a micro-organismal infection of the udder, and a fairly successful treatment consists of the local application of a solution of iodide of potassium to the udder by injection through the teats. I may apply the remedy in the next ten cases and have a death rate of 60 per cent. Naturally my conclusion will be that the treatment is no more successful than that employed in former cases, and my opinion will be quite strong that

the asserted
you may h
cessful wit
ject in the
cussion of
was faulty
He who at
in the pro
helps to pl
to his opp
larges his
his care an

The ve
in this pla
I am prepa
are doing;
reported to
methods i
affairs, the
to do with
this veteri
tily seek o
petitors co
business, a
developme
to the mal
is even re
this veteri
acquaintan
them for t
ests, he w
monsters t
them to be
fessional
endeavorin
understood

the asserted cause of the disease is erroneous. Two or more of you may have tried the same remedy and have been very successful with it, saving all your cases. One will present the subject in the form of a paper before the association. By the discussion of this paper I will be able to discover that my method was faulty and hence my failures and my erroneous opinion. He who attends the associations and who takes an active part in the proceedings is the one who grows with his profession and helps to place his profession on a higher plane; who lives up to his opportunities and best serves his community; who enlarges his capacity for relieving the ills of animals entrusted to his care and correspondingly increases his revenues.

The veterinarian who says to himself, I will open an office in this place; I will post my sign and let the people know that I am prepared to look after their sick animals better than others are doing; I will not rob them of unearned fees like others are reported to have done; I will not resort to such unscrupulous methods it is said others do; I will attend strictly to my own affairs, the getting of clients and dollars, and will have nothing to do with other veterinarians, as they doubtless are quacks; this veterinarian will probably find that business does not hastily seek out the self-announced honest practitioner; that competitors continue to have clients and apparently do a thriving business, and if he will but study himself he will find a large development of sordid selfishness with a tendency to contribute to the malignant reports concerning his competitors, and that he is even resorting to methods which he at first condemned. If this veterinarian but takes the opposite course and courts the acquaintance of neighboring veterinarians and associates with them for the discussion of professional topics and mutual interests, he will find they are not such illiterate and professional monsters that irresponsible and misguided persons have pictured them to be. He will doubtless find they are applying their professional knowledge with the hope of best results, and are endeavoring to obtain an honest living, as that term is usually understood. If they have come short of maintaining the highest

ideals of professional practice, it is largely due to lack of conviction and perhaps perception of the best ideals and best practical ethical procedure, due to lack of a common understanding among the several veterinarians in a community as to what rules should guide them in their relations to each other and to the public. It is only by association that wholesome professional practice is established and maintained.

The well-qualified veterinarians most keenly appreciate the losses and disappointments suffered by the public through confidence placed in the claims of untrained, uneducated, designing persons who advertise to be skilled veterinarians and are entrusted with the medical care of the favorite horse, the much-needed cow, or the highly-prized dog. They exact large fees for valueless service and lead the uninformed to underestimate the merits and worth of the competent practitioner. Laws restraining the incompetent practitioner and the fraudulent pretender should be enacted for the protection alike of the public and the profession. Such legislation cannot be secured until the subject is agitated by those most interested, and suitable bills framed and their passage secured through the intelligent, well-directed efforts of veterinarians who have studied the problem and best comprehend the provisions of law which will accomplish the end sought. It is only by association that veterinarians can reach a mutual understanding and secure concerted action for the procurement of legislation regulating veterinary practice, or promote the cause of veterinary sanitary regulations in municipalities and States.

It is an old truism, handed down from past ages, that it is not meet that man should be alone. While this truism expresses a factor inherent in man as a social being, it is also true relative to his vocation, especially if it be a profession. He is indebted to the past for that accumulated stock of knowledge wrought out of experience and patient observation, to which he has had access and upon which he has so largely and freely drawn, and in return for which he is under moral obligation to add what he may to this general fund of knowledge for the use of coming

generation
of any par
plishing d
stimulation
remain don

The ve
sions in r
can work t
aged and s
fellows. A
velops and
a larger c
incentive t
of purpose
affords a h
that intell
more perfe
intelligent
and veteri

[WRIT

THE US

By JOHN L. C.

Whethe
are present
production
ure upon t
tension ap
a compound
beneficial
perhaps as
as upon its
manner in

generations. Organization of individuals for the advancement of any particular profession is one of the best means for accomplishing definite progress, and has the advantage of imparting stimulation to latent powers and talents which might otherwise remain dormant and sterile.

The veterinary profession is not different from other professions in relation to this general principle. The veterinarian can work to better purpose and to nobler end if he be encouraged and stimulated by the co-operation and sympathy of his fellows. Association with others having the same vocation develops and strengthens the bonds of brotherhood; tends toward a larger conception of professional duty and amenity; gives incentive to study and scientific reflection; encourages honesty of purpose, better business methods, manliness and self-respect; affords a higher quality of companionship and that attrition, that intellectual friction, which leads to better thinking and a more perfect application of veterinary science, and provides an intelligent, forceful body to work for higher and better sanitary and veterinary practice regulations.

[WRITTEN SPECIALLY FOR THE AMERICAN VETERINARY REVIEW.]

THE USE OF IODINE IN INFLAMMATIONS OF THE EYEBALL.

By JOHN LOCKWOOD, NATIONAL VETERINARY HOSPITAL, WASHINGTON, D. C.

Whether from its specific action upon those conditions which are present in glaucoma and periodic ophthalmia, or from its production of external irritation and consequent external pressure upon the eyeball, by which means the severe intra-ocular tension appears to be speedily overcome, iodine (in the form of a compound aqueous solution) appears to have an immediately beneficial effect in internal ophthalmia. But as its action is perhaps as much dependent upon the method of administration as upon its own therapeutic value, I will give an account of the manner in which I have employed the solution. To one drachm

of the officinal compound aqueous solution of iodine I add one drachm of distilled water and inject it hypodermically in the centre of the supra-orbital forameu. I have found that one such application is all-sufficient to obtain the desired effect, and no after treatment has been found necessary. The result is soon apparent. With the exception in some cases of a continued closure of the eyelid for a day or two, which, however, is not due to photophobia (as the light is soon tolerated), but to palpebral œdema, the acute symptoms quickly disappear; and should it be a first attack, the structure appears to have regained its normal condition in a few days.

In those cases which have recurred several times an injection of iodine, if done early, and before the appearance of hypopyon, will arrest the further progress of destructive inflammation. After trying the various stereotyped methods of therapy, I began experimenting in a new field, and as a result can only testify having been rewarded with very astonishing and lasting benefits by this discovery. Through your valuable medium I wish to bring it before the notice of the profession, and hope to hear some further account of its use. I have only to add that I have always considered it necessary to ascertain whether the case presented was one in which such a procedure was contra-indicated, as in abscess or ulcer of the cornea, or in injuries of the corneal surface which may proceed to ulcer, etc.

THE USE OF ESERINE IN ACUTE INDIGESTION.

BY DR. E. E. BITTLES.

A Paper read before the late meeting of the Pennsylvania Veterinary Medical Association.

Veterinarians differ greatly as to the action and use of eserine, some claiming it worthless, others a great cure-all.

I think the great difference of opinion is due to some never trying it until they are positive the patient must succumb. Some giving too large and others too small doses, faulty preparations, etc.

Of the various preparations of eserine the sulphate is prefer-

able, and
grs. each.
for any or
not advisa
In prepar
of eserine

One dr
and usual
tion will
in a dark

I have
acute indi
tended wi
tract is te
the pressu
parts, the

Bearin
we resort
1 gr. of es
bowels an

To pro
thing bett
creosote, a
dose in ha
and dang

In all
I have ne
has about
account o
some case

In cas
any of the
urgent I p
hours wor
work off
cases in t

able, and should always be obtained in sealed glass tubes of two grs. each, as they are easily carried, and one tube is sufficient for any one case; seldom using more than one-half of it, as it is not advisable to repeat the dose in less than three or four hours. In preparing the solution use 1 drachm of distilled water to 1 gr. of eserine.

One drachm of the above solution used hypodermically is a safe and usually effective dose for an animal of 1000 lbs. The solution will keep for several days if kept in a well stoppered bottle in a dark place.

I have obtained the best results from its use in those cases of acute indigestion where the bowels and stomach are greatly distended with gas with no audible intestinal sound. The entire tract is temporarily paralyzed from the great strain caused by the pressure of the gases and space is at a premium in those parts, the stomach being full to overflowing.

Bearing this in mind and drenches being out of the question we resort to a more modern treatment and give hypodermically 1 gr. of eserine, which will increase the peristaltic action of the bowels and carry off the gases.

To prevent further formation of gas I have never found anything better than 1 oz. pulverized ginger, 1 drachm beechwood creosote, and 2 drachms chloroform, given in capsules. Repeat the dose in half an hour if necessary. If the breathing is labored and danger of suffocation would use the trocar.

In all stages of bowel trouble caused by the formation of gas I have never found anything to equal eserine. Barium chloride has about the same action, but is more difficult to administer on account of its being very irritable; also following its use in some cases we have paralysis causing death.

In cases of sub-acute indigestion, impaction, constipation or any of those conditions of torpidity where the symptoms are not urgent I prefer aloes, and if they do not give relief in 12 or 15 hours would use eserine, which will cause the aloetic purge to work off nicely. I find eserine does not give relief in those cases in the first stages.

My experience with eserine in parturient apoplexy has been that it helped them along to the place where so many of those cases go—the boneyard.

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

EXTENSIVE INJURIES TO FACIAL AND CRANIAL BONES, WITH RECOVERY.

By D. J. HALLORAN, M. D. C., Oconto, Wis.

Thursday evening, July 28, I was called four miles into the country, and upon arriving I found that a horse had run away and came in contact with the outer guard of a mowing machine, with the cutting bar standing perpendicular, the guard penetrating the frontal bone on the right side and close to the median line, breaking the superior turbinated bone and entering the cribriform plate of the ethmoid. The horse presumably forcibly raised his head, and pulled a part of the cribriform bone downward, exposing the brain and plowing through the frontal, nasal, superior maxillary and lachrymal bones, extending downward as far as the infra-orbital foramen, then tearing the skin and underlying soft tissues, and terminating at the nasal opening. Making an unfavorable prognosis, and the owner wishing to give the animal any chance that he might have, I proceeded to remove all fragments of bone. I removed eight pieces varying in size from $1\frac{1}{2}$ in. square downward. I cleansed the wound, and, filling the same with antiseptic gauze and sewing the skin over it, the head presented a fairly good appearance. Before leaving I observed slight nasal hæmorrhage, but thinking it of little importance I left, requesting the owner, that, if the horse lived for eight days, to send him to my hospital. Saturday, July 30, I was informed that the hæmorrhage did not cease. Upon arriving at the farm I found the horse very weak from loss of blood; the visible membranes pale. I at once proceeded to arrest the hæmorrhage, which yielded readily. I should have added that before that the wound communicated with the buccal cavity by separating the soft tissue from the bone and opening at the second molar tooth. One peculiar fact is that the horse at no time refused food or drink. Nine days after the accident he was brought to

my hospital
a good re
left side
liberated
continued
ploring I
There wa
accident t
including
work sinc
a small e
last ment
I mak
may be in

As a
of treatm
the direc
I have p
tensor of
various d
recovered
factory in
tenotomy
it offers s
ance and
practice,
hear from
tion.

TREATMENT

Having
antiseptic
last Aug
Lexington
pricked t
and gave
terior part
of the sta

* Report

my hospital, where I gave him my special attention, he making a good recovery. About Aug. 20, an abscess appeared on the left side of the median line on a level with the orbital arch. I liberated a small amount of pus and from which the discharge continued, and on Sept. 12 the horse was returned. Upon exploring I discovered a piece of loose bone, which I removed. There was also unmistakable evidence that at the time of the accident there had been a transverse fracture of the frontal bone, including the orbital arch. The horse has been regularly at work since Oct. 1, and only a small scar remains, together with a small elongated osseous deposit, marking the location of the last mentioned fracture.

I make this report simply to show to what extent an animal may be injured and recover his former usefulness.

SPRINGHALT AND METATARSAL TENOTOMY.

By WM. N. COLMAN, D. V. S., Sterling, Rice Co., Kansas.

As a point in the statistical argument in favor of this mode of treatment of the disease known as springhalt, I have followed the directions laid down by Degivé on seven head of horses. I have performed the division of the tendon of the lateral extensor of the phalanges on these horses with springhalt in various degrees, and have obtained the following results: Four recovered completely, and the other three showed a very satisfactory improvement—almost a complete recovery. Metatarsal tenotomy is a simple and harmless operation, and I think that it offers sufficient chances for success to encourage its performance and to justify its adoption into the domain of common practice, if guided by the skill of a qualified man. I hope to hear from some of my brothers of the profession on this operation.

TREATMENT OF OPEN JOINT BY ANTISEPTIC BLISTERING.*

By DR. J. CURTIS MICHENER, Colmar, Pa.

Having reported a few cases of open joint, treated with an antiseptic blister, would like to add one more. On the 11th of last August, Mr. A. G. Haldeman's high-spirited horse of Line Lexington was being bedded by his twelve-year-old son, who pricked the horse at the fetlock. He made a bound forward and gave a violent kick, running a prong into the postero-exterior part of the thigh, the end of the handle striking in corner of the stall. The fork remaining in, the horse continued kick-

* Reported to late meeting Pennsylvania State Veterinary Medical Association.

ing and surging about until the handle was broken into pieces and the prong driven in its full length. It came through on the inside of the joint, just beneath the patella. Great excitement in the village, the horse squealing, kicking, throwing himself down, and the blood flying all around. After getting the horse somewhat quieted and secured, a stalwart fellow pulled out the fork, having to make the second effort and use his full strength. The prong was bent in different places and directions. On arriving two hours later, found an ugly lacerated wound on outside of thigh three inches wide and into the bone, and having a pocket three inches deep. Inside of joint showed a small puncture where point of prong came through. The horse was suffering intensely, keeping the injured limb in constant motion. After cleansing wound and limb, rubbed in blister ointment, thoroughly over the entire joint, and also plastered the exterior wound full of the same (getting severely criticised for so doing). Next morning horse stood firmly upon the injured limb, breathing naturally and feeding well. Rubbed on more ointment, although the blister was acting freely and the leg already enormously swollen. The swelling kept very tense for three days, but the horse stood and trod firmly. Gave him much walking exercise (for which I was again severely criticised). On the fourth day the outside wound commenced to discharge a healthy pus. It was syringed twice daily with chloride of zinc lotion, ten grains to the ounce, and the whole leg bathed frequently with vinegar and cold water, equal parts. Upon the twelfth day the leg had resumed its natural size, and upon the nineteenth day the horse was put to work, the wound having healed and lameness all gone.

In justice to some of the Dutch villagers, will state that the *fork* was carefully greased and put in a dry place *before I arrived*.

CENTRAL RUPTURE OF THE VAGINA.*

By W. J. MARTIN, V. S., Kankakee, Ill.

The patient, a bay mare, aged five years, of the trotting breed variety, was brought to my infirmary on August 16 of the present year, suffering from a central rupture of the perineo-vaginal walls, caused by a difficult parturition some four months previous. In driving, and even when standing still, the mare would pass gas and a muco-purulent pus from the vagina, which, falling upon her tail and hocks, presented a disgusting

* Read before the Illinois State Vet. Med. Ass'n, Nov. 16, 1898.

appearan
the fibre
close th

The
laceratio
tion, 10
placed u
made as
oughly i
that the
muscle o
side to c
remedy
of the le
the rem
raising o
its fellow
walls w
tourney, ta
tween th
paring o
silk liga
inch bac
after eve
The sutu
five sutu
away, bo
sprayed

The
three tin
ing the
drug.
a day, v
quart of
day. O
from bel
the rent
for the
show tha
tissues
cautions
which th
surgery.

appearance. As the rupture did not extend entirely through the fibres of the sphincter ani, it was decided to endeavor to close the laceration.

The mare was placed upon a light diet for several days, the laceration was washed several times a day with a formalin solution, 10 per cent. At the end of this régime, the mare was placed upon the operating table and the field of operation again made aseptic; the hands and instruments were washed thoroughly in the same solution. On examination it was found that there was marked atrophy of the left posterior constrictor muscle of the vulva, which caused the lip of the vulva on that side to drop downward about one inch below its fellow. To remedy this defect, an incision was carried through the vulva of the left side between the mucous membrane of the vulva and the remnants of the atrophied constrictor, which allowed of the raising of the tissues remaining up to corresponding level with its fellow of the opposite side. The edges of the perineo-vaginal walls were now deeply pared, with a thin, straight-bladed bistoury, taking care to remove all mucous membrane from between the edges which it was desired to unite. After thorough paring of the edges, a strong curved needle, armed with a double silk ligature, was passed through each lip of the rent, about one inch back from the border of the torn edges, and firmly tied, after even apposition of the edges of the rent had been obtained. The sutures were inserted about one-half of an inch apart and five sutures were inserted. All blood clots were then washed away, both in the vulva and externally, and the parts were then sprayed with a 4 per cent. solution of formalin.

The after treatment consisted of flushing out the vagina three times a day with a weak solution of formalin, then spraying the external wound with a 4 per cent. solution of the same drug. The diet consisted of a small amount of hay three times a day, with an allowance of bran at each meal. About one quart of clear water was injected into the rectum three times a day. On the eighth day the sutures were removed, beginning from below upwards; and upon manipulation it was found that the rent had firmly united. I report this case more especially for the benefit of the younger members of the profession, to show that partial or even completed rupture of the perineo-vaginal tissues may be successfully treated when strict antiseptic precautions are observed in spite of the discouraging manner in which this lesion is treated of in our best works on veterinary surgery.

EXTRACTS FROM EXCHANGES.

GERMAN REVIEW.

By W. V. BIESER, D. V. S., New York City.

CYSTS IN THE RECTUM.—A horse's owner consulted author concerning difficult defecation on the animal's part; other veterinarians had told him without making any rectal examination at all that matters would right themselves in time. Author promised to visit the animal in a few days, but an attack of colic necessitated immediate attention of the author. By rectal examination a pear-shaped cyst the size of a fist was found, the cause of the difficult defecation. Incision and removal of the cyst cured the trouble. These examples of cysts show the need of careful manual examination in all diseases of the rectum or vagina. Don't make an examination by eyesight or from symptoms, but introduce by all means manual examination.—(*Berl. Thierärzt. Woch.*)

CYSTS OF THE VAGINA.—A cow had for several months a swelling at the lower end of the vagina, rosy red and of the size of an apple. At a distance it looked like prolapsus vaginae, and was especially noticeable when the cow lay down. But vaginal examination elicited the fact that it was a retention cyst accompanied by two smaller ones situated just in front of it, all three of which were easily removed by the knife.—(*Berl. Thierärzt. Woch.*)

POLYPUS OF THE RECTUM.—The author was called to see a foal said to have rectal prolaps. Examination showed a pedunculated swelling the size of an apple which had been expressed through the anal opening; the pedicle was attached (as shown by manual examination) about 13 cm. inside the anal opening. A ligature was placed about the pedicle and by graduated and alternate torsion and traction the pedicle, together with a piece of the mucous membrane of the rectum, was removed by the aid of scissors. A quick cure resulted.—(*Berl. Thierärzt. Woch.*)

ŒSOPHAGOTOMY IN A COW.—The author found a cow suffering from symptoms of foreign body in the œsophagus. Efforts at removal failed. Having no probang resolved on œsophagotomy. I would suggest that the foreign body (a large potato the size of a fist in this case) be removed as in this case by a corkscrew. I recommend this because (1st) the opening in the

gullet m
(2d) bec
dimensi
muscle
sulted f
lished.
ever for

INFL
Colony
flammat
pression
short co
no espec
fever, in
100 per
be a na
conjunc
his gait
convale
inflamm
tions ar
nary co
mention
by pain
near th
the mu
tributed
disease.
often m
from th
Colony
for good
straw.
careless
Woch.)

STR
ton].—
staggeri
previou
died sho

gullet need not be as large as would otherwise be the case, and (2d) because the muscular separation is of the smallest possible dimension, allowing of the greatest amount of recontraction of muscle after operation. I sewed up the skin only. A fistula resulted for twelve days. In five weeks complete cure was established. During treatment give only soft feed and no hay whatever for the first few days.—(*Berl. Thierärzt. Woch.*)

INFLUENZA IN THE HORSE AT CAPE COLONY.—In Cape Colony an epizootic malady exists characterized by catarrhal inflammation of the upper air passages and intense nervous depression. The malady begins with a chill and frequent dry, short cough. The trachea and larynx are involved, but there is no especial swelling of the glands of the neck; there is high fever, intense depression with hanging of the head; pulse 80–100 per minute, respiration increased; there may and may not be a nasal discharge; appetite diminished; lids swollen and conjunctiva congested; lachrymation; the horse is unsteady in his gait. In mild cases the fever subsides in a few days and convalescence occurs. But in many cases diarrhoea and bowel inflammation set in, occasionally laminitis. Other complications are bronchitis and pneumonia, resulting from the pulmonary congestion. Rheumatism frequently occurs in the above mentioned epidemic. This rare complication manifests itself by pain and stiffness and swelling of the muscles and tendons near the joints. These swellings, also present frequently in the muscle layers of the chest and vaginal regions, are attributed by the author to the cardiac weakness present in this disease. Independently of rheumatism, however, a stiff gait often manifests itself due entirely to the elimination of motion from the swelling of muscles. The commonest sequela at Cape Colony to influenza was morbus maculosus. The treatment calls for good nursing in hygienic stalls and especially for good dry straw. The high mortality at Cape Colony must be ascribed to carelessness in the management of the stalls.—(*Berl. Thierärzt. Woch.*)

ENGLISH REVIEW.

STRANGE CAUSE OF RUPTURED UTERUS [*By A. T. Hutton*].—At the post-mortem of a mare in foal, which was found staggering in a field early in the morning, having been seen the previous evening apparently in perfect health, and which had died shortly after, extensive peritonitis was found, due to a rup-

ture of the uterus made by the lower end of the upper portion of a fractured metacarpus of the foetus. The fracture had evidently taken place some time previously, as there was an attempt at a rectangular union of the broken bone.—(*Vet. Record.*)

TUMOR ON THE LOWER JAW [*By W. M. Scott*].—A case of osteo. chondroma or chondro-sarcoma (?) is so reported by the author, principally on account of its size and of peculiar location. The horse had had a small swelling on the lower jaw and under the incisor teeth, which had begun its growth after the extraction of one or two teeth of the same jaw. It had increased to enormous size. The surface was smooth and glistening, slightly cyanotic in patches. Its covering was a continuation of the mucous membrane, painless to the touch, but very vascular. The tumor did not seem to interfere much with the prehension of food. It is not stated that treatment was resorted to.—(*Vet. Record.*)

EQUINE ACTINOMYCOSIS [*By A. L. Farrant, M. R. C. V. S.*].—The case of a ten-year old cob, which, presenting difficulty in swallowing food, was brought to the attention of the author, who found the tongue enlarged and having on its side a tumor as big as a walnut. Wharton's duct was enlarged and completely blocked up. With a silver probe introduced into it, the flow of saliva was re-established, the tumor on the tongue was incised and on examination proved actinomycotic in nature. Besides external application on the submaxillary, laryngeal and parotid regions, gargles of carbolic and boric acids, a treatment of iodide of potassium was prescribed and followed by recovery in about three weeks.—(*Vet. Record.*)

FISTULA OF STENO'S DUCT [*By A. L. Farrant, M. R. C. V. S.*].—A mare had a wound on the salivary duct, on the side of the face, from which saliva escaped. The ends of the duct were about an inch apart, and several attempts at treatment failed, viz., sutures, glass tube into the canal, metallic plate in the wound and the skin drawn tight over it with suture and coating of collodion. At last, as the external wound seemed to show a natural tendency to close, a seton was passed through the cheek. When, a week later, the internal opening seemed likely to remain permanent, the external wound was fine sutured and painted with collodion. The recovery was complete up to two months later, when a slight external discharge occurred again. The tract was syringed out with solution of chloride of zinc and plastered over daily. In a few days all was healed and the mare has remained well ever since.—(*Vet. Record.*)

A RE
ell, M. R.
supposed
long time
signs of s
when she
post-mort
and the fo
weight) la
diaphragm
head lying
by its me
it. The
life; its f
and there
mummific

MELA
—A Jers
ated about
milked it
not other
decided u
clam and s
The tumor
inches an
fibrous tu

TUBE
M. R. C. V.
pected of
dicated.
ment, the
general c
difficulty
size of th
trouble.
began to
diseased t
tion revea

EXTR
OF A MA

A REMARKABLE CASE.—Under this heading Mr. C. A. Powell, M. R. C. V. S., records the case of a mare which in 1893 was supposed to be about foaling. She did not that day, nor for a long time afterwards. She was put to work and never showed signs of sickness or of pregnancy again until September, 1898, when she was taken with an attack of colic and died. At the post-mortem it was found that the "womb was shrivelled up and the foal (a fully developed one, weighing about a hundred-weight) laid up close to the stomach, the hind part touching the diaphragm, its hind and fore legs doubled beneath it, with its head lying on its chest between the forelegs. It was surrounded by its membranes, which were intact and easily separated from it. The foal was well preserved, its hairs being as tight as in life; its flesh was firm and on being cut rather yellow in color and there was not the least appearance of either putrefaction or mummification."—(*Vet. Record.*)

MELANOTIC TUMOR IN A COW [*By J. Young, M.R.C.V.S.*].—A Jersey cow had a tumor growing on the right flank, situated about four inches below the ilium, and when the cow was milked it used to rest on the head of the person milking. It did not otherwise interfere with general health. Its extraction was decided upon and done partly with the ecraseur and partly with clam and sharp red-hot iron. After treatment, antiseptic dressings. The tumor was almost circular, its circumference measured 18 inches and weighed nearly four pounds. It was a pigmented, fibrous tumor or melanotic fibroma.—(*Vet. Journ.*)

TUBERCULOUS TESTICLE IN A BULL [*By A. S. Laurie, M.R.C.V.S.*].—At first examination the animal had been suspected of suffering with orchitis and received the treatment indicated. Notwithstanding saline aperient and anodyne liniment, the animal grew worse, the testicle enlarged, and the general condition suffered. Castration was performed with difficulty on the diseased side on account of adhesion and of the size of the organ. The healthy testicle was removed without trouble. The animal made a fast recovery and at once began to improve. He will soon be fit for the butcher. The diseased testicle weighed four pounds. Microscopic examination revealed its tuberculous nature.—(*Vet. Journ.*)

FRENCH REVIEW.

EXTRACTION OF A GLASS TUBE FROM THE THORACIC CAVITY OF A MARE, SUFFERING WITH PLEURISY AND TREATED BY

WASHINGS OF THE PLEURA.—Prof. Cadeac, in the *Journal of Zootechny*, of the Lyons Veterinary School, relates this very interesting case, which shows that surgical treatment in pleurisy of horses is perfectly justifiable, even with free incision of the pectoral walls. A mare affected with double pleurisy was first treated by punctures on both sides, made at the evident part of the effusion. On one side the effusion became purulent, there was a pleural abscess, which was opened freely, by an incision of 10 centimeters between the seventh and eighth ribs above the spur vein. The pus escaped freely, a drain tube was inserted and held in place by a dressing, and irrigation of antiseptic solutions were made. During one of the washings the extremity of the glass tube used for that purpose broke and could not be removed; notwithstanding which the mare recovered with the exception of a small fistulous tract. When Prof. Cadeac saw the mare she was in perfect condition of health, with only the fistula. He decided to remove the cause of this trouble. He cut the tissues over it, sawed the seventh rib a little above the tract of the fistula, and with care entered a pyogenic cavity, from which the glass tube was extracted. It measured 9 centimeters in length and was five millimeters in diameter. The mare recovered, though it took a long time for the wound, which became fistulous, to heal. It was rebellious to injections of sublimate, to saturated solutions of picric acid, or of tincture of iodine diluted to the third; it only closed after two injections of the pure tincture. The mare was destroyed shortly after on account of a fracture of the right hind leg. At the post-mortem were found an almost complete pleuritic union on the right side, except near the place of the fistula; there was also a little remaining pus; the pleural sac had entirely disappeared.

DYSTOKIA DUE TO A UTERINE FIBROSARCOMA. [*By Mr. Dossat.*]
—A cow at term is unable for the first time to deliver her calf, which is dead and partly decomposed. On examination of the uterus the cause of the dystokia is discovered. It is a tumor of the organ, very hard, bosselated, elliptoid in form, and without adherence to the foetus. It must be removed before the foetus can be extracted. Made loose by careful tearing with the hand, a strong ligature is applied upon it and cut in two pieces, which were, however, too large to be brought out of the uterus. It was necessary to cut several small pieces to extract it. The calf was then removed but not without great difficulty. The growth weighed seven pounds, measured 30 centimeters in length and 18 to 20 in width. It was fibro-sarcomatous in na-

ture. No animal has after treatment with water, at

LACTATION
MELANOMAS
upon which
fects of pa
use of the
which by
surgical in
fered with
ment that
sheath, of
growth on
nomas of
anus and
injecting
meters of
ized water
formed at
isolated b
that rema
carefully
have not
thinks tha
ferred to a

TRAUMATISM
RUM—RE
few recor
tention.
after all
first day,
sue; sub
the tensit
day. Sar
able on th
Finally re
The hors
days after
serum, ha
seven cor
grammes

ture. Notwithstanding the painful manipulation to which the animal had been submitted, the recovery was very rapid. The after treatment consisted in antiseptic irrigation, tepid boricated water, at 5 per cent., and internally tonics.—(*Revue Veter.*)

LACTIC ACID AND PYOKTANIN IN THE TREATMENT OF MELANOMA [*By Mr. Bissange*].—Basing his experiments upon what is known in human medicine of the destructive effects of pathological tissues, the author has had recourse to the use of these compounds in the treatment of melanotic tumors, which by their position or their number were not amenable to surgical interference or for those which by their situation interfered with the execution of a function. It is upon that treatment that he relieved a horse that had enormous tumors of the sheath, of the anus and on the tail, one which had a melanotic growth on the point of the shoulder, a stallion which had melanomas of the tail, a mare which had them on the vulva, on the anus and on the tail, etc. His mode of procedure consisted in injecting at various points around the tumors 10 cubic centimeters of a solution of 25 grammes of lactic acid in 75 of sterilized water. A few days after he opens the little abscesses formed at the point of injection and removes the mass, which is isolated by a deep furrow of sloughing tissues. The wound that remains is washed and dressed with pyoktanin after being carefully curetted clean. Though his experiments are few, and have not always given him complete recovery, the author thinks that this treatment is perfectly justified in the cases referred to above.—(*Rec. de Med. Vet.*)

TRAUMATIC TETANUS TREATED WITH ANTITETANIC SERUM—RECOVERY [*By Mr. P. Chenol*].—This case is one of the few recorded in French papers, and on this account deserves attention. The subject was placed under treatment two days after all the symptoms were well developed. He received the first day, 20 grammes of serum, injected into the muscular tissue; subcutaneous injection being impossible on account of the tensivity of the skin. This was renewed twice during the day. Same treatment for several days. Improvement noticeable on the second day. By degrees the injections were reduced. Finally recovery. The author resumes his report in saying: The horse taken with traumatic tetanus, and treated only two days after the appearance of the symptoms with antitetanic serum, has required two months to recover completely: during seven consecutive days he received two hundred and sixty grammes of serum, the injection being made into the thickness

of the muscles without leaving any marks. To those who do not care to try intra-cranial serotherapy he recommends intramuscular injections.—(*Rec. de Med. Vet.*) [Will not Professor Nocard tell the author that this case is one of those that recovers without antitetanic serum?—EDIT.]

VILLATE'S SOLUTION AND CARTILAGINOUS QUITTOR [By *P. Dieudonné*].—The treatment of this troublesome affection by injections of Villate's Solution does not enjoy any more the reputation it had years ago, and according to the author this is due to the fact that it is not carried out properly and that the solution is not used as it should be. For Mr. Dieudonné it should be *filtrated* and thus be free from the sulphate of lead that is in suspension. Three indispensable conditions must be filled: (1) Watch the case yourself and make the injection yourself; (2) use a syringe in good condition and thoroughly clean; (3) use filtrated Villate's Solution made of sulphate of copper and of zinc, of each 64 grammes; Goulard's extract, 1.25 grammes; vinegar, 1000 grammes. The foot must be properly pared and left unshod, the fistulas are carefully probed once to examine their course and depth; 4, 5 or 6 syringefuls are pushed into the tracts every three hours for a few days, until when, the secretion being altered or reduced, the injections are gradually diminished and stopped. After fifteen days at the most, the animal is cured. If such is the case, it is far superior to all forms of treatment, including the operation which demands from four to six weeks, and even sometimes does not cure.—(*Rec. de Med. Vet.*)

BELGIAN REVIEW.

DYSTOKIA IN A COW DUE TO TORSION OF THE FŒTAL SPINE [By *M. Nizel*].—This unusual case was brought to a successful termination only after incision of the foetal abdomen, removal of the intestinal organs and embryotomy of the left hind leg. The presentation was ventral without the presence of the extremities. By exploration it was observed that the enormous left flank of the foetus was protruding. Above, the croup lying transversely, had in its middle and between the two iliums a hard growth (stump of the tail); on the right, one hind leg (the left) bent and with the hock resting in a uterine *cul de sac* formed by the anterior legs. The left hind was secured and amputated; the abdomen of the foetus freely opened, the abdominal organs removed, and after much labor the right

hind leg secured, the rections, the the vulva, book recent lateral comp sentation of

PERSIST Mr. E. Lien complete at by a fibro-e trunks, the of the comm functional to six mont served were peated cou marked dif the heart, in the lung of the hea the jugular Post-morter ventricle d enlarged, v aorta and p teriosus, wh are thicker trunk. Th insertion o and assume thin but ye

RUPTURE HORSE [B old, carrying hour to a nothing ab The next d ful; the sw Suspecting was applic suppuratio laminitis of ment, gene

hind leg secured and by violent tractions, made in different directions, the calf was extracted. As soon as it dropped from the vulva, the entire body folded in two as the leaves of a new book recently opened. The cause of the trouble was a right lateral complete and a congenital torsion of the spine with presentation of the left flank.—(*Annales de Belge.*)

PERSISTENCY OF THE DUCTUS ARTERIOSUS IN A DOG [*By Mr. E. Liénaux*].—The obliteration of the ductus arteriosus is so complete at birth that at that time the arterial canal is replaced by a fibro-elastic band which unites the two principal aortic trunks, the pulmonary artery and the aorta. The persistency of the communication is very uncommon and has given rise to functional and anatomical disturbances in a young dog, five to six months old, which ended in death. The symptoms observed were: general loss of strength, absolute anorexia, repeated cough, no expectoration, accelerated breathing, with marked difficult inspiration, low dullness on percussion above the heart, normal sound anywhere else, cracking sounds in the lungs; hard whistling sound heard with the systole of the heart, femoral pulses very strong, venous pulse to the jugular with the ventricular systole. Temperature 40.1°. Post-mortem: Heart is large, left ventricle thickened, right ventricle dilated and also hypertrophied; tricuspid opening enlarged, valve intact; pulmonary opening too narrow. The aorta and pulmonary arteries communicated by the ductus arteriosus, which is as big as the pulmonary artery. Its walls are thicker and harder; it is inverted obliquely on the aortic trunk. The aorta is largely dilated from its origin to above the insertion of the ductus arteriosus, then it suddenly contracts and assumes its normal dimensions. It is a true aneurism, with thin but yet stiff walls.—(*Annales de Belge.*)

RUPTURE OF THE PERFORATING TENDON IN A SADDLE HORSE [*By Mr. F. Hendrickx*].—A saddle horse, seven years old, carrying a heavy man on his back, was submitted for an hour to a rapid gait. Returned to the stable, he presented nothing abnormal except a little stiffness of the left hind leg. The next day the left hind fetlock was swollen and very painful; the swelling was localized to the posterior part of the joint. Suspecting a synovitis of the great sesamoid sheath, treatment was applied and improvement followed, when a few days later suppuration became manifest. This was soon complicated with laminitis of the right hind foot. Notwithstanding the treatment, general disturbances became more marked, excessive

pain, loss of appetite, raising of temperature, formation of abscesses and soon there is dropping of the fetlock, the posterior face of the joint touches the ground, the toe is elevated and the pathognomonic symptoms of rupture of the perforans are manifest. The horse is destroyed. At the post-mortem were found: Extensive suppurative synovitis, infiltration of the perforatus tendon and complete rupture of the perforans above the sesamoid pulley. Evidently after the excessive work asked of the horse there had been only a stretching of the perforans, which was followed by synovitis and as a consequence of the soreness and difficulty of standing on the right leg because of the laminitis, the exaggerated work demanded of the left leg had brought about the total rupture of the perforans.—(*Annales de Belge.*)

LATE MANIFESTATIONS OF GLANDERS IN A HORSE APPARENTLY CURED [*By Mr. F. Hendrickx*].—The conclusions of the author are that one must be very prudent before allowing a horse to resume his work, after having presented symptoms of glanders which is apparently cured. It ought to be kept under careful watching for a long time, and in all cases not to be allowed to go free as long as there is discharge from the nose. The case is this: A ten-year-old horse from a stable infected with glanders, becomes lame with a keraphylocele; he is operated upon; a few days afterwards he presents suspicious glands and scarcely any discharge; there are no chancres. Malleined, he has a raising of temperature of 2.3° , and local manifestations at the point of injection. Twelve days after, second injection of malleine, there is reaction, but less serious. Eighteen days later, third injection, raising of temperature of 0.9° only, no local reaction. Twenty-four days after last injection, negative result. During that time the suspicious gland has disappeared. Watched for one year, when he is examined some ten times, he appears in perfect health. Then he loses his appetite, loses flesh, has nasal hæmorrhages and exhibits all the clinical symptoms of glanders. At the post-mortem lesions of glanders of old and recent formation were detected. The author thinks that when the horse was returned to his work he was not entirely cured, and was still carrying glanderous germs, perhaps in very small numbers or much attenuated, but which under special conditions of work, hygiene, etc., multiplied and developed new virulency.—(*Annales de Belge.*)

INTER

THE

The fol
tion of Am

DEAR
Internation
the Sevent
year 1899.
with the ca

In June
at Stuttgart
various Eu
mittee was
The comm
of Baden t
the dispos
ertainmen

The go
to foreign

The c
(\$2500), th
Congress.

The C
week of A
morning a

The of
Means wi
and comm

For th
posed for

a. Pre
diseases in

b. Th
and the u
disease, a
fectual m

c. Th

d. Th

e. Th

erection o
ing chair
surgeons

INTERNATIONAL VETERINARY SURGEONS.

THE SEVENTH CONGRESS AT BADEN-BADEN IN 1899.

The following circular letter is published for the information of American veterinarians, and explains itself :

DEAR SIR :—In accordance with the resolution of the Sixth International Congress of Veterinary Surgeons, held at Berne, the Seventh Congress will take place at Baden-Baden in the year 1899. The veterinary surgeons of Baden are entrusted with the carrying out of the arrangements.

In June, 1896, the undersigned called a preliminary meeting at Stuttgart, which was attended by veterinary surgeons from various European countries. At this meeting a business committee was selected, to be presided over by the undersigned. The committee has received intimation from the Town Council of Baden that rooms for holding the meetings will be placed at the disposal of the Congress, and that various festivities and entertainments will be offered by the town.

The government of Baden will undertake to send invitations to foreign governments.

The chancellor of the empire has granted 10,000 marks (\$2500), the government of Baden 2000 marks (\$500) for the Congress.

The Congress will be held at Baden-Baden in the second week of August, 1899, and will last six days, beginning each morning at nine o'clock.

The official languages will be German, English and French. Means will be provided for the immediate translation of speeches and communications.

For the work of the Congress the following subjects are proposed for discussion :

a. Precautionary measures against the spread of epidemic diseases in consequence of international trade in animals ;

b. The prevention of tuberculosis amongst domestic animals and the use of the flesh and milk of animals suffering from this disease, and connected with this—the latest demands for an effectual meat-inspection ;

c. The prevention of foot- and- mouth disease ;

d. The prevention of swine-fever ;

e. The forwarding of veterinary science especially by the erection of institutions for experiments in diseases and by forming chairs of comparative medicine in colleges for veterinary surgeons ;

f. Conclusion of the work of the drawing-up of a common nomenclature in veterinary medicine ;

g. Official veterinarianism.

According to a careful estimate which has been laid before the government of Baden the costs will be about 28,000 marks. The anatomical section alone will require 2500 marks and all official notices and the reports of the transactions will appear in the three official languages.

In view of these facts the subscription has been fixed at 12 marks (\$3.)

Those gentlemen who have become members and paid the subscription will receive copies of all publications, even if they are unable to be present at the Congress.

In order to interest as many as possible in the Congress the committee has resolved to suggest the formation of sub-committees in all countries.

The first business of these sub-committees would be to call the attention of veterinary surgeons, agriculturists and breeders to the Congress, to induce as many as possible to become members and to collect their subscriptions. The sub-committees, after defraying expenses, should forward the balance of collected monies not later than January 2, 1899, to the "Rheinische Creditbank" in Baden-Baden. The bank will then book the receipts and payments of the Congress and furnish an account of the same.

It is important that the business committee should know by December 1, 1898, how many gentlemen from each country are likely to take part in the Congress.

We should be much gratified if you would give us your opinion as to formation of a sub-committee for America and especially if you would give us the names of those who should be asked to take part in it. Should you consider the formation of a sub-committee impracticable or unadvisable, perhaps you would kindly suggest some other means of attracting a large attendance of your countrymen at the Congress, as perhaps through the mediation of the various veterinary and agricultural societies. We will also gladly give attention to any suggestion in reference to the business programme of the Congress which you may wish to make. Finally we should be greatly obliged if you could obtain the support of the veterinary and other papers interested for the Congress.

The definite programme of the Congress will be forwarded to you in good time.

A local
ments for
those who
to obtain
assure you
by the bea

BADEN-BADEN

— "I e
N. Y.

— "Co
Youngston

— "I
Flemington

— "Pl
without i

— "Be
cellent wo

— "A
I enclose

Kelly, So
Mo.

— "I
without i

himself i
mitsburg,

— "T
this sessio

you they
Dean, Ka

— "V
than for

business
enjoy the

— "I
that each

\$3, for w
300, Leb
number.

A local committee in Baden-Baden will undertake arrangements for securing lodgings. We are already enabled to inform those who intend to attend the Congress that they will be able to obtain board and lodging from 6 marks per day and we can assure you that the Congress will be most hospitably received by the beautiful town of Baden-Baden.

Yours very truly, DR. LYDTIN,
Chairman of the Business Committee.

BADEN-BADEN, 25 May, 1898.

ITEMS FROM REVIEW SUBSCRIBERS.

—"I enjoy the REVIEW very much."—*G. C. Kesler, Holly, N. Y.*

—"Continue my subscription, by all means."—*S. R. Craver, Youngstown, Ohio.*

—"I cannot be without my REVIEW."—*J. H. Conover, Flemington, N. J.*

—"Please continue to send the REVIEW, as I would not be without it."—*B. M. Freed, Sharon, Pa.*

—"Best wishes for success of REVIEW, which is doing excellent work."—*James D. Hopkins, Newark, N. J.*

—"Acting on suggestion that each subscriber send another, I enclose check for one year's subscription for Dr. James S. Kelly, South St. Joseph, Mo."—*W. A. Heck, South St. Joseph, Mo.*

—"I appreciate the REVIEW very much, and would not be without it, and think that every veterinarian wishing to keep himself informed should be a subscriber."—*J. W. Riegle, Emmitsburg, Md.*

—"The enrollment at the Kansas City Veterinary College this session is twenty-five regular students, and let me assure you they read the REVIEW with much interest."—*S. Stewart, Dean, Kansas City, Kan.*

—"Veterinary practice seems better, and prospects brighter than for years, and I look for next spring to open up with a business that will make us all glad that we are veterinarians. I enjoy the REVIEW very much."—*J. R. Mitchell, Evansville, Ind.*

—"In response to your suggestion in December REVIEW that each subscriber send you a new one, I enclose an order for \$3, for which kindly mail REVIEW to Dr. H. J. Ackerman, Box 300, Lebanon, N. H., for a year, beginning with December number. I am satisfied that no veterinarian who does any

reading at all can afford to do without your valuable publication. Hope that your circulation may be more than doubled."

—*Herbert S. Perley, Ottawa, Ontario.*

—"I enclose draft for two new subscribers both to begin with January issue: Dr. B. F. Kaupp, 723 W. Eleventh St., Kansas City, Mo., and Dr. S. E. Bennett, Bureau Animal Industry, care Armour & Co., Kansas City, Mo. Shall send several other subscriptions later to begin the new volume with. I am making a strong effort to induce each of our members to Subscribe to a veterinary journal, as I believe them to be one of the most essential factors in maintaining interest in association work."—*W. A. Heck, South St. Joseph, Mo.*

—"I am very much interested in Prof. Williams' translation of Schmidt's article on 'Parturient Paresis.' I have had splendid success in three cases of parturient apoplexy, all making good recoveries. I sent to Hausman & Dunn, Chicago, and got a large tube, which I used in the prescribed manner, giving only one injection. Gave aromatic spirits of ammonia and nitrous ether, $\frac{3}{4}$ i each, every four hours, with sodium chloride and magnesium sulphate. Two of the cases went down twenty hours after dropping their calves. I gain new ideas from every issue of your journal."—*J. B. Caughey, Columbiana, Ohio.*

CORRESPONDENCE.

A CALL TO THE VETERINARIANS OF ILLINOIS.

KANKAKEE, ILL., December 15, 1898.

To the Members of the Profession in Illinois:

GENTLEMEN:—At the last annual meeting of the Illinois State Veterinary Medical Association, held in Chicago, November 16 and 17, 1898, it was decided to again take such action as would secure the passage of a law regulating the practice of veterinary medicine and surgery in this State. With this object in view, it was decided to call upon each and every member of the veterinary profession in this State, to ask of the Senator and Representatives of his district, either by a personal interview or by letter, to give their active aid and support to secure the passage of a just and equitable law that will place the members of the veterinary profession in this State on an equal basis with those of the other learned professions.

The next meeting of the State Association will be held at the Leland Hotel in Springfield, February 15, 1899. All qualified members of the profession in this State, whether members

of the a
meeting
methods

MISSOU

The r
in the Y
with the
Stewart,
Professio
A. T. P
Kansas
Netherto
physician
Health an
Great
was by fa
associatio

The f
sociation

"WH
ideas as t
sippi vete

"Reso
the profes
prosperou
zation."

DISCUSSIO

The C
discussion
the U.S.V
house Ins

When
suggested
the metho
tious and

of the association or not, are cordially invited to attend this meeting and take part in the discussion concerning the best methods of elevating the standard of our calling.

W. J. MARTIN,

Pres. Ills. State Vet. Med. Ass'n.

SOCIETY MEETINGS.

MISSOURI VALLEY VETERINARY MEDICAL ASSOCIATION.

The regular quarterly meeting of this association was held in the Y. M. C. A. rooms, St. Joseph, Mo., Dec. 12, at 8 P. M., with the following members present: Drs. Burgess, Bennett, Stewart, Kaupp, Moore, Wright, Kelly, Forbes and Heck. Professional visitors were Drs. J. S. Anderson, Seward, Neb.; A. T. Peters, Lincoln, Neb.; J. S. Buckley, U. B. McCurdy, Kansas City, Mo.; Henry Washburn, James Wilson, E. J. Netherton, and Thomas H. Ripley, St. Joseph, Mo.; city physicians, the Mayor, and several members of the Board of Health and City Council of St. Joseph.

Great interest was taken in the programme, and the meeting was by far the most important and valuable ever held by the association.

The following resolution was read and adopted by the association:

"WHEREAS This association has been asked to express its ideas as to the feasibility of the organization of a trans-Mississippi veterinary association, be it

"*Resolved*, That it is the opinion of this association that the profession of this section is not sufficiently enthusiastic and prosperous to attend and properly support such an organization."

DISCUSSION OF DR. STEWART'S PAPER ON SLAUGHTER-HOUSE INSPECTION.

The Chairman called upon Dr. John Forbes to lead in the discussion upon the paper presented to the Omaha meeting of the U.S.V.M.A. by Dr. S. Stewart on the subject of "Slaughter-house Inspection," and Dr. Forbes responded as follows:

Dr. Forbes' Paper.

When the subject of discussing Dr. Stewart's paper was first suggested to me by the Secretary, we had some difficulty as to the method of procedure. We thought of dividing into infectious and non-infectious diseases, diseases of cattle and diseases

of swine, and after due consideration we decided to take the paper as it was written and divide it into two sections; the first section being allotted to myself, and the other to Dr. Heck.

Reading the paper over carefully, we find ourselves in agreement on its most salient points.

One of the essentials to an interesting discussion is that there be some variety of opinion amongst the participants. The paper is admirably written, and bears out the author's reputation in this respect. It is a good account of the work as it is carried on in the slaughter-house.

We are all agreed as to the wisdom and propriety of the meat inspection law, and we regret that the Federal government is unable to go further and extend it so as to cover every carcass intended for human consumption. While we are engaged in the protection of the public health of the other states, we cannot extend the same protection to the people of the state or municipality in which we are located. Local authorities must protect themselves. The Federal government maintains the equilibrium between the states, but each state has control of its internal affairs.

We are also agreed that in order to have a thorough system of inspection, great dependence must be placed in the competency of the inspector. Special training is necessary. A knowledge of veterinary science is indispensable to an appreciation of diseased conditions as they are met with in the slaughterhouse. Further, the inspector must be of sound judgment, and able to maintain himself intelligently in his decisions. Unnecessary friction will be avoided by exercise of this estimable quality.

The flesh of animals affected with anthrax or rabies, while regarding it as positively dangerous, is seldom if ever met with on the killing floor. The course of anthrax is too rapid to allow of the animal reaching a public market or abattoir. To meet with rabies on the killing floor the disease would have to develop after the animal was marketed, for I fancy there would be great difficulty in getting such an animal to a market or shipping point.

Malignant œdema, as has been stated, is not found in this country, and the same can be said of foot and mouth disease. European authorities do not consider the meat in the latter disease dangerous, and are satisfied in condemning only the head and feet, unless of course in the most aggravated cases. Consumption of the milk from such animals is said to produce a malignant sore throat in the human subject.

Ani
the poi
picious
wholes
bowels
which
the hea
occurs,
enter th
onous p
from fle
a very
mentio
to putr
Forty r
cretions
tions, c
falls in
the he
anaerob
cording
terium.
from so
are suit
The fle
meat k
it in th
so free
with sp
sition.
subject
tance.
manife
tem ex
themse
extra ti
If t
should
nation,
material
intellig
Thi
conduc

Animals which have died before slaughter, or are killed at the point of death, the flesh of such instead of classing it as suspiciously unwholesome, I would regard as positively unwholesome and dangerous. As you are aware, there are in the bowels of live animals large numbers of bacteria and their germs, which are only prevented from gaining access to the system by the healthy resistance of the intestinal mucosa. When death occurs, however, this resisting power is lost, and the bacteria enter the body, rapidly multiply and spread, and generate poisonous ptomaines. Several of these ptomaines have been isolated from flesh in a state of decomposition, and have proven to be of a very poisonous nature. It may serve the purpose only to mention one, viz., nervine, found in animal matters abandoned to putrefaction. "Ten milligrammes has fatal effect on a cat. Forty milligrammes has fatal effect on a rabbit. It excites secretions, increases salivation, accelerates the heart and respirations, contracts the pupils, causes staggering gait, the subject falls in collapse and dies in clonic convulsions with paralysis of the heart." The bacteria in the intestines are aerobic and anaerobic, and the ptomaines are oxygenic or non-oxygenic according as they are the product of an aerobic or anaerobic bacterium. Animals which have been slaughtered, or are dead from some cause, which leaves the blood deficient in oxygen, are suitable media for the propagation of the anaerobic species. The flesh of such animals is difficult to preserve, and packers of meat know this from experience, for they are unwilling to place it in their salting cellars. Such scrupulousness, however, is not so freely exercised in the sausage factory. A liberal mixing with spices soon disguises any trace there may be of decomposition. Such meat produces a septic poisoning in the human subject. Ante-mortem inspections we consider of great importance. It enables us to detect and separate animals already manifesting disease, in order to insure a more careful post-mortem examination. Such animals we arrange to have killed by themselves, and at a time when the inspector can devote some extra time to the examination.

If the post-mortem is conducted by another inspector he should be notified as to the cause of the ante-mortem condemnation, and given such other information as would guide him materially in the examination, and enable him to arrive at an intelligent conclusion.

This ante-mortem inspection, however, especially when it is conducted in stock yards, before animals change hands, is

looked upon in another light than this, principally by those engaged in the live stock trade, and causes some little annoyance in its practical application. One man thinks that the inspection should be conducted at some other time or place, so that the other fellow shoulders the loss, and another thinks that having passed one inspection, they are "immune," so to speak, against another.

With reference to actinomycosis, a great change of sentiment has taken place within the last few years. The time was when an animal showing an enlargement anywhere on the head was condemned without any regard whatever to his physical appearance or to the probable conditions to be found on post-mortem examination. Members of the profession were indiscriminate in their condemnations, and the result was that thousands of dollars worth of wholesome meat was consigned to the grease factory, the greater part of the loss falling on the producer. It is different now; we are not willing to risk an opinion till after a post-mortem examination. The conditions then appearing lead us to a conclusion. The lesions of the disease in cattle are generally confined to the jaw, although the actinomyces have been found in the lungs and other organs, where they form more or less voluminous and irregular tumors, calcified or purulent, and somewhat yellow in color. In the lungs it may resemble tuberculosis, and in distinguishing between the two I prefer trusting to the microscope than to the naked eye. Localized, it does not render the meat unhealthy, except when on the jaw it interferes materially in mastication, deglutition and the general nutrition of the animal. A fistula discharging into the mouth contaminates the aliment, and may cause general dissemination. In some of the other animals it affects a different form. In the pig, for instance, it has been seen in the muscular system and various other regions, appearing as small abscesses formed by the actinomyces. Such meat, it is needless to state, ought to be condemned.

With reference to tuberculosis we note that it is not very plentiful among the cattle of the West. Among swine it seems to have gained a foothold. In the slaughter-house it mostly interests us in so far as it renders the flesh dangerous. Opinions vary greatly as to the healthfulness or unhealthfulness of tuberculous flesh. In Europe where the disease is rampant, and where the price of meat is almost beyond the reach of the poorer classes, the matter of the disposition of tubercular flesh becomes largely an economic question. Confiscation of all tu-

berculosis
limit of
are con
ket as t
proof to
disease
tice is f
this dis
of tuber
fection
bacilli
nels an
number
they ob
foci of
irritati
elemen
local, b
ease, or
the dis

Dis
by the
emphli
tion by
the blo

WI
by the
to con
lesions
that it
calcific
been v
and th

Oc
Gener
inspec
slaugh
The d
diseas
man c
judgm
carcas

So

berculous carcasses would raise the price of meat beyond the limit of the poor people, so that only the generalized carcasses are confiscated, the milder cases being allowed to go on the market as tuberculous meat and sold at reduced prices. There is no proof to show that this has increased the mortality from this disease in the human subject, in the countries where this practice is followed. If we consider the manner of the spread of this disease within the body we may conclude that some cases of tuberculosis are not so dangerous as appears. As a rule infection takes place by way of the lungs or the intestines. The bacilli penetrate the mucous membrane, enter the lymph channels and are carried to the nearest lymphatic glands, in a great number of cases without injury to the organ through which they obtained access. They thus form in the glands primary foci of the disease. The bacilli on reaching the gland set up an irritation, followed by a cell proliferation and formation of new elements. This goes on for some time, although it is yet purely local, but it is soon followed either by dissemination of the disease, or calcification overtaking the process, in which latter case the disease becomes stationary.

Dissemination takes place in three ways: (1) contiguity, (2) by the lymph, (3) by the blood. Contiguous dissemination is exemplified in tuberculosis of the serous membranes. Dissemination by the lymph stream is a slow process. Dissemination by the blood causes a general infection.

When we have a case of generalized tuberculosis, as shown by the appearance of tubercles throughout the carcasse, it is right to condemn such meat, but when we have a case where the only lesions shown are in the lymphatic glands, and we are confident that it is so confined, and especially when the glands are in a calcified condition, and the carcass has the appearance of having been well nourished, I think there is no danger in such meat, and there is justification for allowing it to go on the market.

Occasionally we find "Texas fever" in the slaughter-houses. Generally, however, the disease is observed by the ante-mortem inspector and as a result the whole drove of cattle is sent to the slaughter-house in order to save the carcasses of the least affected. The disease is not communicable to man, but as it is a febrile disease the flesh cannot but have deleterious effects on the human organism. I quite agree with Dr. Stewart that it taxes the judgment of the inspector quite severely, in passing upon the carcasses in which the disease is not fully developed.

So far as appearances go a great many carcasses of exposed

cattle look perfectly well, and it is impossible to tell that they have been infected. The only way out of the difficulty would be to take the temperature of each animal, rejecting those that show an increase.

At the close of Dr. Forbes' paper, Dr. W. A. Heck was called upon. who responded as follows:

Dr. Heck's Paper.

The author of this splendid paper under discussion has labored under a great disadvantage in its preparation. The large number of topics considered necessitated briefness and thereby some of them have suffered for want of completeness.

The opinions here offered, however greatly they may vary from those of the author, are made in the most friendly spirit.

After once having established a system of meat inspection the questions promptly arise, "How is it to be conducted?" "Who is to inspect it?" and "What is to be considered fit for food?" The latter question is the one which concerns us the most.

Emaciation may be classed both as physiological and as pathological. The first is a normal wasting away from lack of provender, the second due to some perverted physiological condition.

We are all agreed that normal emaciation is not hurtful for food, yet the disappearance of the nutriment of the flesh renders it necessary for us to make a distinction.

In this process of emaciation the interstitial, mesenteric and abdominal fat is gradually consumed, leaving small islands along the spine and pelvis with a small amount always remaining in the muscles. The vital forces diminish; the heart weakens; blood becomes impoverished and the serous elements percolate through the tissues and accumulate about the joints along the spine and in the pelvis as a yellow gelatinous accumulation repulsive to sight. The muscle fibres, retaining in themselves the strength and power of the animal, shrink from metamorphic changes of the sarcous elements. Such meat contains more fibrous indigestible matter than normal flesh.

Sentiment demands that we condemn animals reduced too much in flesh. Some advocate condemning when the skeleton is visible upon being dressed. Personally I think the age of the animal, the loss in weight, and the condition of the flesh and viscera are all factors to be considered in passing judgment.

Of course, in emaciation from disease one has no hesitancy about condemning.

It se
nize acu
abattoir
an hour
past the
be diffic
Acute m
when ot

The
with fat
the case
to recog
mortem

I ha
for urin
close en

The
urine h

It se
to the c
effect o
have th
conside
was tho
This th
that a l
ful univ
others a
ful wax
tion wa
at post
color m
and th
yellow
to both

The
to impr
cattle v
they w

The
they a
manner
means

It seems a practical impossibility for an inspector to recognize acute kidney affections on killing floors of any of our large abattoirs. Hogs are rushed along at the rate of several hundred an hour and in but few of them is the kidney exposed until far past the inspector, when, if he sees a detached kidney it would be difficult to find the carcass from which it was removed. Acute nephritis is very rarely seen except in cases of cholera, when other sympeoms would first attract attention.

The kidneys of all our food producing animals are covered with fat, which is not removed in the dressed carcass except in the case of the pig. Under these conditions how is an inspector to recognize such affections as acute nephritis unless the ante-mortem symptoms have aroused suspicions?

I have never, in my experience, seen a case. The nasal test for uriniverous odors is impractical, as no one has time to get close enough to each carcass to do this.

These cystic kidneys are frequently seen, and where the urine has been much obstructed I would favor condemnation.

It seems that the color of the fat of beef cattle is rather due to the diet than to other things. All of you have noticed the effect of food upon the color of butter fat. Why should it not have the same effect on the interstitial fat? At one time I gave considerable thought to this subject and some investigation. It was thought the breed might have something to do with it. This theory was followed until found fallible. It was noticed that a bunch of cattle fed in the same lot would bear a wonderful uniformity in color, some herds being an old gold yellow, others a dirty mixture of yellow red, and still others that beautiful waxy white color so much sought by the packers. Attention was then turned to the food, and from a study of the ingesta at post-mortem I have reason to believe the beautiful white color may come from fattening on white corn and alfalfa hay, and that yellow corn and timothy and clover hay may grow yellow fat. This question of color is quite an important factor to both packer and stockman.

The packers now resort to a bleaching process in the coolers to improve the color of carcasses and if they could buy on foot cattle which could be relied upon to dress out a beautiful white, they would command a better price.

The author makes use of the term "cold abscess," and states they are found in all parts of the body. From the sweeping manner in which the term is used we can hardly infer that he means tubercular abscesses, but rather abscesses which exist

without any specific cause and without any active inflammation. If this is true, the term is misleading. In fact, the term "cold abscesses" is now almost obsolete among modern pathologists. It formerly was used to denote an old tubercular abscess, like a psoas abscess, but since so much has been learned in the past few years about tuberculosis, it seems that the term no longer fills a place in scientific phraseology.

The disease affecting the lymphatic glands of sheep (sometimes called lung disease) and, as the author has stated, resembles tuberculosis, is not only confined to those raised in Utah and Colorado, but is found in Arizona, New Mexico and California. The worst affected flock I ever saw came from California. Neither is it confined to the lymphatics of the thorax. It may involve any glands of the body, but more particularly after the mediastinal, the sub-lumbar, prescapular and inguinal.

Trichinae in small numbers in pork certainly do not alter the character of the flesh, but where they are present in countless multitudes the severe myositis induced by their presence and migrations cause in many instances marked structural alterations. The muscle fibres are in some cases hypertrophied, due principally to the increase in the inelastic fibrous sheaths which enshroud the sarcous elements. Some of the fibres seem to have lost their vitality and are apparently dead; others have undergone degeneration (Zenker's Disease). In some carcasses the trichinae are nearly all dead, and then begins a steady process of calcareous infiltration or degeneration of the organisms and cysts, and continuing pervades the adjacent structures till there is so much of this calcareous matter (principally carbonates and phosphates of calcium) that the flesh seems actually gritty on being treated for microscopical examination. I maintain that such flesh is unwholesome and should be condemned. I am not saying that all trichinosed meat should be condemned, nor any large per cent. of it, as the cooked worms are probably assimilated, but in such conditions as described above, I am thoroughly convinced.

A great deal of our inspection is based on purely sentimental principles and our sentiments are capable of cultivation or degradation.

Some people may eat rats, mice, snakes and ants without violating their dietary scruples. These people are not the highest in the scale of civilization, yet when we look about us we find some so-called enlightened who are fond of hot chit-

lings, lu
other pa
are disg
almost e

Whe
—drawi
demn, w
vidual i
reau of
plete as
impossib
we can,
cass is c

Mora
I believ
rats, mic
insult t
in time
itself.
nation f
better s
everything
inspecti
diseased
demand
condition
of cultiv

If th
and "lo
must no
specte
every ta
of such
best. I
exactly
actinom
organis
ture) is
price an
those af
not abso

Beca
in his ly

lings, lungs, chicken and calf heads, and even testicular and other parts of a carcass, which to people of higher cultivation are disgustingly loathsome, and even the thought of which is almost enough to make one a vegetarian.

When an individual inspector is left to his own discretion—drawing his own conclusions as to what and when to condemn, we have as many variations in opinion as we have individual inspectors; therefore, in such a great system as the Bureau of Animal Industry, we should have a fixed ritual as complete as possible to insure uniformity. I am aware that it is impossible to lay down rules that will apply in all cases, but we can, I believe, arrange instructions for cases where the carcass is condemned on sentimental principles.

Morality, intellectuality, refinement and dietary cleanliness I believe go hand in hand. Force upon a people of this type, rats, mice and other classes of food mentioned above, and you insult their higher instincts; you crush their self-respect; you in time drag them down to a level with the polluting influence itself. There is a desire on the part of the best people of our nation for the better things of this life. They are striving for better schools, better homes, better clothes, better food, better everything. They are ready and clamoring for thorough meat inspection. Not only is the public demanding protection from diseased meat, which is positively dangerous as food, but they demand protection from the loathsome affections and unclean conditions which appeal to the finer and more delicate instincts of cultivated and refined people.

If there is too much meat that is "suspiciously wholesome" and "loathsome" and "growsome" that for mercenary reasons must not be condemned, then I say let us have two classes of inspected products. One absolutely sound, pure and free from every taint; the other conditions which are not dangerous but of such character as to be undesirable to those who demand the best. Let the meat be branded so that the purchaser can know exactly what he is buying. Because the germs of tuberculosis, actinomycosis, and all the other pathogenic and non-pathogenic organisms are killed by a high temperature (cooking temperature) is no reason why I should be obliged to buy at the same price and eat without knowing mildly affected cases of any of those affections, or loathsome diseases and conditions which are not absolutely dangerous.

Because a sheep previous to slaughter may have carried about in his lymphatics merely a few ounces or a few pounds of pus

is no good reason he should be placed on the market on a par with a perfectly healthy one. This scheme may not be near at hand, but this question will never be at rest in my mind until it is consummated, and the sooner the people come to understand the situation the sooner will it be realized.

GENERAL DISCUSSION ON SLAUGHTER-HOUSE INSPECTION.

Dr. Johnson: If there is one thing that I am prouder of than another it is that I am an American citizen, and I am also proud that we have a good system of inspection, and that we are under no danger of consuming meat that is loathsome and disgusting. I feel that the best is not too good for us, hence I do not want to see engrafted into American systems, some of the European methods. We want to see the American people have the best of the American products.

Dr. Stewart: I am quite interested in the two papers just read, and as many of us are inspectors there ought to be a good deal to say. My paper was necessarily condensed so as not to make it too voluminous. The dominant thought was to arrange some ideas which would help in formulating some conception in regard to the work of inspection. My acquaintance with veterinarians without any experience goes to show that they enter the business with very crude ideas, and lacking in matters of judgment. The paper was not written with the idea of enlightening those in the service, but to help others in organizing municipal inspection at home. I would like to see some of our progressive men take up this work and elaborate it into a book. One phase of the question was not entered into by either paper, viz., reasons for inspection. If we had reasons to put before the public, our position could be better maintained, and this thought was intended to stimulate in this direction. As to criticisms they are most gratifying, probably too flattering to make a good debate. If the gentlemen had gone into it tooth and nail, it would have provoked a lively discussion. Malignant œdema the writer stated was not found in this country. Probably he made the statement without much thought. I have seen several cases which I thought were malignant œdema, and, therefore, I felt justified in adding it to the list. The subject of rabies excited my interest. As a state official I once had occasion to visit a head of cattle exhibiting signs of this disease, and came to the conclusion that rabies was present. Some communities have a natural dread of this disease and destroy the animals, others again are not so fastidious, and have the habit of shipping animals to market forthwith; therefore, it is not improbable

that cases possible to which should I advised and the animal with the did not m was notice infection. have seen nity for g place this fection an subject— brought t actinomy teresting. culous an slaughter often the Lyford, o were affe ested in t ous odors carcass as it in the peculiar c mooted to in Wester

Dr. A
to what l
gratulate

Dr. K
different
would pr

Dr. I
duce a w
the inges

Dr. W
alfalfa w

Dr. L
Heck?

Dr. A

that cases of rabies could get to market. It is not probable but possible to get them. I remember a bunch of Texas steers, which showed wildness, and the symptoms were those of rabies. I advised quarantine but the local authorities were too slow, and the animals got off to the market. I was much pleased with the remarks made about actinomycosis and was sorry he did not make reference to the dissemination of the disease. It was noticed that fistula in the mouth was said to cause general infection. I have never seen a case of general infection, and I have seen cases where the jaw was affected, and there was opportunity for generalized actinomycosis. If dissemination can take place this way why don't we see more of it? Cases of lung infection are brought about in the same way as in the human subject—by inhalation. Actinomycosis of the liver has been brought to my notice, but have never been able to discern the actinomyces in these cases. Tuberculosis in swine was quite interesting. Swine get it from eating the carcasses of tuberculous animals. The farmer having a steer that does not thrive slaughters him and allows the hogs to eat the carcass, and very often these unthrifty cases are of a tuberculous nature. Dr. Lyford, of Minnesota, cites a case where the entire herd of hogs were affected from eating a diseased carcass. I was also interested in that part where the nose is used in detecting uriniferous odors. We frequently find butchers who can tell such a carcass as it comes along by its smell, and inspectors could learn it in the same way. It was interesting, too, the reference to the peculiar coloring of the fat of carcasses. When this subject was mooted to a Kansas farmer, he replied that the cattle were raised in Western Kansas, and it was due to eating sunflowers.

Dr. Anderson: I do not think of anything that I can add to what has been already said, but you will allow me to congratulate you upon having such a good and interesting meeting.

Dr. Kaupp: Dr. Heck spoke of different foods producing different colors; I would like to ask him if cotton-seed meal would produce a yellow color?

Dr. Heck: I don't know; a great many things will produce a white fat. I came to these conclusions from a study of the ingesta at post-mortems.

Dr. Wilson: Dr. Heck, do you think that white corn and alfalfa would produce white fat in an old Jersey cow?

Dr. Bennett: What is your ideas of these conditions, Dr. Heck?

Dr. Heck: When employed at Kansas City the packers

told me that cattle with this white condition of the fat were much preferred by them. I was assisted much in getting names of feeders of different bunches of cattle with fat of different colors, but just at that time sickness prevented further investigation. When recovered, it had been so long that I feared my statistics would not be accurate, for the feeders might have forgotten all about the particular bunches of cattle. I came to these conclusions from an examination of the ingesta.

Dr. Moore : I don't know anything about meat inspection, but I have seen a few cattle fattened, and I would like to ask Dr. Heck the percentage of those cattle which show this waxy condition of the fat. White corn is worth more than the yellow, and it is usually hauled and shipped out, and it is not much raised. The alfalfa sections are limited, therefore the percentage of cattle of this character must be limited.

Dr. Johnston : Some four months I spent in Phoenix, Ariz. All cattle there are fed on alfalfa and barley, and it struck me to see such fine meat in the butcher shops, and I used to stop and admire the finest specimens I ever saw in my life. I found there white and yellow fat where no corn was fed.

Dr. Heck : This question of the effect of food on color of fat can be easily settled. The inspection force in the Missouri Valley has an excellent opportunity to observe the different manifestations at the abattoirs, and trace the animals to the feeder. There is a very small percentage of these beautiful white carcasses.

Dr. Kaupp : Occasionally we find one or two cattle of a golden yellow, while the remainder are normal.

Dr. Heck : I thought I made this clear. By cattle being shipped to market in one car, is no guarantee that they have all been fed in one lot. Stockmen frequently in grading a car of cattle, buy from other feeders to complete their shipment, and there are many other complications that are possible that would tend to defeat any investigation.

Dr. Netherton : I would like to ask Dr. Heck what is the difference in the nutrient material of the different kinds of corn, and what would be the effect of feeding brewers' grains?

Dr. Heck : There is no difference in the quality. Feeding slop has a tendency to produce soft, watery flesh, which does not contain as much nutrition as the flesh of corn-fed animals.

Dr. Kelly : The army regulations are against the purchase of beef with yellow fat. They claim that the percentage of loss is greater in such meat.

Dr. K
brewery, i

Dr. Pe
on tubercu
age of ho
literature
remark ab
and they a
ceived a g
condition,
worm to
Dr. Forbe
meetings
leaving th
cussing m

Dr. S
been disc
sheep. O
They are
neys and
ing mem
around do
very comm
Stiles, the
probably
Kansas C
to think i
in two de
micro-org
never be a

Dr. B
American
It is not a
is inform
with the
ence to ac
municate
pathologi
cases of a
the bovin
of the lu
animal sh
demning

Dr. Kaupp: I call to mind one bunch of cattle fed in a brewery, in which the fat was white.

Dr. Peters: I am much interested in Dr. Forbes' comments on tuberculosis in hogs, and would like to know what percentage of hogs were affected, and also the organs affected. Our literature is very scarce on this subject. Dr. Heck made some remark about cystic kidney. He did not say much about them, and they are a source of merriment to the farmers. I have received a good many letters from farmers of Nebraska about this condition, and I would like to know the relation of the kidney worm to these cysts. I liked the comment on ptomaines in Dr. Forbes' paper. This has been one of the most interesting meetings that I have ever attended. It is the first time since leaving the old country that I have had an opportunity of discussing meat inspection.

Dr. Stewart: There are several points that have not yet been discussed, amongst them cystic kidney and lung disease in sheep. Of cold abscesses there is a chance to say considerable. They are often met with in cattle located in region of the kidneys and liver. A cold abscess seems to consist of a dense limiting membrane, the cavity filled with laudable pus. The area around does not show active inflammation. Cystic kidney is very common, and I may say that it is not due to a worm. Mr. Stiles, the zoologist of the Bureau of Animal Industry, who probably knows as much about worms as anybody, while in Kansas City, had his attention drawn to this, and he was inclined to think it due to the echinococcus, but he failed to prove this in two demonstrations. He thought that it was due to a serous micro-organism. I think that the classification of meats will never be applied in this country.

Dr. Bennett: Like a former speaker I am proud to be an American citizen. A meat inspector should have no sentiment. It is not a disease and should be eliminated from his mind. He is informed as to his duty, and if he cannot work in accordance with the rules laid down he has no business there. With reference to actinomycosis there is no case or record of it being communicated to man from animals. Ostertag, one of the greatest pathologists of the day, regards it as a local disease. Human cases of actinomycosis are brought about in the same way as in the bovine animal. We frequently have cases of actinomycosis of the lung, and if sentiment has anything to do with it, the animal should be condemned, when there is no reason for condemning it. When interfering with mastication it causes

emaciation, and the animal ought then to be condemned. A meat inspector should eliminate sentiment from his mind; his knowledge of disease should be a sufficient guide to him in his work. In tuberculosis I think we ought to cut closely. We should condemn all cases of tuberculosis, no matter how little or how great they may be affected. We never find muscular actinomycosis, but we do often find tuberculosis in the muscles. An inspector must rely on his judgment and knowledge of pathology in protecting the public health. If he allows sentiment to enter into the question he is not doing right towards the man handling the meat, nor to the producer nor to the man exposing it for sale.

Dr. Heck: Some one has said that they did not believe in aping Europe in our customs, but we must realize that they have the oldest systems of meat inspections and the most rigid laws, and in many things we pattern after them—military matters, for instance.

They have found there that by condemning all diseased carcasses, some of which are not absolutely dangerous, that the loss entailed is too great, therefore they find it necessary to place on the market two classes of meat, and I believe we will have to come to the same conclusion. The public will protest against putting on the market the carcass of any animal having a purulent abscess or an actinomycotic tumor on the jaw. It is an imposition upon the people to allow stuff of this kind to go on the market as being thoroughly inspected and free from disease. We recognize that in diseases due to germs, the flesh can be rendered harmless by subjection to a high temperature, as in cooking; then why not place mild cases of tuberculosis on a par with actinomycosis, and other affections just mentioned not dangerous, by canning the product. It is different in cases where ptomaines have formed, as I understand that certain ptomaines do not lose their toxic qualities by being subjected to cooking temperature. The last speaker has said that actinomycosis was never seen in the muscular system, but I have seen several cases of muscular actinomycosis. One case I remember some ten years ago while at college. The case was a two-year-old heifer in a herd of 21, where eleven were affected, and she had actinomycotic growths in great numbers over all parts of her body. From some on the legs below and above the hocks and other parts of the body, specimens were taken for microscopic examination, and on being examined the organism was found. I have also seen some while engaged in practice,

but never
kidney is
retention
possibly t
amount o
demned.

Dr. S.
lightened
urine. I
everything

The m
8th at 8.
showed s
invitation

The
proved.

Presie
to exped
Secretary
tion from
erinary M
of veteri
referred

The a
Veterina
College,
Censors
carried.

A cor
and Neb
society t
a part of
sociation
consider
tary bein
would ta
to be co
matter, a
derived
the prop

but never since I have been in the government service. Cystic kidney is not due to a kidney worm, but I believe them to be retention cysts, due to obstruction of uriniferous tubules or possibly to the ureters themselves. I believe that when a large amount of urine has accumulated the carcasses ought to be condemned.

Dr. Stewart: I wish to express my sorrow that an enlightened veterinarian should think that these cysts contained urine. I always supposed that it was a limpid fluid that lacked everything of urine but its fluidity.

(To be continued.)

CHICAGO VETERINARY SOCIETY.

The regular monthly meeting was called to order December 8th at 8.30 P. M., President Robertson in the chair. Roll-call showed sixteen members present, Dr. Butterfield visiting by invitation of Dr. B. A. Pierce.

The minutes of the previous meeting were read and approved.

President Robertson passed over the usual remarks in order to expedite the business of the evening. The reports of the Secretary and Treasurer were dispensed with and a communication from Dr. W. J. Martin, President of the Illinois State Veterinary Medical Association, calling attention to the great need of veterinary legislation in the State of Illinois was read and referred to the committee on legislation.

The application of Dr. Walter E. Howe, a graduate of Toronto Veterinary College, 1896, and New York State Veterinary College, 1897, was favorably reported on from the Board of Censors and his admittance to membership was voted on and carried.

A communication from a committee representing the Iowa and Nebraska State Veterinary Medical Association, asking this society to consider the advisability of organizing and becoming a part of the proposed Trans-Mississippi Veterinary Medical Association, which was laid over from the November meeting for consideration, was re-read and discussed, resulting in the Secretary being instructed to inform the committee that this society would take no action as a body; the decision of the society not to be construed as an indication of unkind feeling toward the matter, as individually the members recognize the vast good derived from veterinary societies and looked very favorably upon the proposed organization.

Dr. H. W. Hawley then presented his paper entitled
VICES AND THEIR RELATION TO SOUNDNESS.

I shall define a vice in a horse as a fault or habit which injures the selling price or usefulness of the animal for the purpose required, and which cannot be remedied. I shall name cribbing, weaving, balking, kicking, shying, halter pulling, switching, side reining, lugging, running away and nervousness as vices. Vices are natural, hereditary or acquired. Some are the result of a diseased condition.

Cribbing is a habit, the result of idleness and too long intervals between meals. The horse amuses itself or is hungry and bites at the manger, and gradually works himself into this habit. A cribber should in every case be rejected, as it is a disagreeable habit, leading to indigestion and kindred diseases. The animal is also liable to disfigure or destroy anything with which his teeth come in contact. Wedges driven between the teeth will produce sufficient soreness in a few hours to prevent temporary cribbing. All suspicious cases should be examined for this trick.

Weaving is also a habit acquired from idleness. The rattle of a chain halter may assist in the formation of the vice. Circumstances might determine the acceptance or rejection of a weaver. A horse does not weave in harness; at least, I have never seen one. There is slight danger of it injuring the health of the animal, especially if he is in constant service. After explaining the nature of a weaver to the buyer, he should be advised to use his own judgment. The animal might be valuable as a prize winner, sire or brood mare.

Balking.—A man who has patience enough to use a balky horse, deserves to be pensioned. I have never known of a balky horse being cured of the habit. He is liable to stop at any moment, and if stopped may refuse to move, and should by all means be rejected. We have what may be termed green balkers. The horse may be clever in double harness, but when first put in shafts will manifest all the symptoms of a balker, but soon becomes clever with a lesson or two. Unless sold to be thoroughly broken to single harness, such a horse should not be permanently rejected. A good test for a balky horse is to start, stop, back up, and then start again. If he does this perfectly he is probably all right.

Kicking.—A kicking horse is certainly not a very desirable animal either in stall or in harness. A horse when first put in single harness may kick a few times, but soon becomes gentle

with a lit-
ness, but
be usefu

Shyin
the city s
shy. Th
be thorou
less it can

A con
adapted to
the buyer

Switch
of a disea

Side-r
can have.
that it is
the mouth

Luggi
means be
of a bit an
ness, as pr

Runni
constitute
away if u
away und
that has r
case. A l
which can
my opinio
ness, it is
in harness
should be

Nervo
nervous w
totally un
horse, wo
not be ind
another w
wilder th
the person

Leavin
with a fe
for sound

with a little handling. Mares sometimes kick in double harness, but work cleverly single. A kicking harness horse might be useful as a saddler if sold for that purpose only.

Shying.—Nearly all country horses when first brought into the city shy for a while, but some are short sighted and always shy. The latter should be rejected. When a horse is sold to be thoroughly broken he should not be rejected for shying unless it can be determined that it is chronic.

A confirmed halterpuller might be useful as a coach horse if adapted to the purpose and kept in a box stall. In such a case the buyer should be advised to use his own judgment.

Switching.—This is rarely seen in the horse, and is the result of a disease of the ovaries in mares. They should be rejected.

Side-reining is one of the most disagreeable vices a horse can have. If it is caused by a sore mouth and it can be shown that it is only temporary, the horse should be driven again after the mouth heals.

Lugging is also a disagreeable habit, but cannot by any means be always called a vice. A horse may lug on one kind of a bit and drive beautifully with another. It is not an unsoundness, as properly hitched a horse will not lug.

Running away.—There is a difference of opinion as to what constitutes a runaway horse. Any prompt, free driver will run away if unrestrained. Some first-rate family horses will run away under certain circumstances. Some will say that a horse that has run away once is never safe again. Such is not the case. A horse that will suddenly make a dash for liberty, and which cannot be controlled with the ordinary driving bit, is, in my opinion, a runaway horse. In examining horses for soundness, it is customary in this country to run them for their wind in harness. If they stand such a test with an ordinary bit they should be passed.

Nervousness is hereditary, but a high-bred animal becomes nervous with abuse. Many are useful for some purposes, and totally unfit for others. What one person would call a nervous horse, would just suit another. I know a veterinarian who could not be induced to ride behind a snappy high-class horse. I know another who would not give a dollar for a horse unless he looked wilder than a hawk. The practical examiner should consider the person and purpose for which the horse is bought.

Leaving the subject of vices for discussion, I will conclude with a few remarks on the practical part of examining horses for soundness. I take it for granted that most of the members

present are trying to enlarge their bank accounts. The price for examining horses ranges from \$2.50 to \$7.50. It takes very little time and labor to look over a horse, and a hundred or more examined each year will go quite a distance toward paying expenses. It has been argued that the dealer or seller should receive no consideration whatever. I have observed that about 75 per cent. of the horses sold in Chicago, subject to veterinary examination, go before one man. I said to myself, there is some reason for this, and when I saw him look at some horses I tried to discover the secret of his success, and I found that it was his fair treatment and consideration of the seller as well as the buyer. In fact, he has the universal respect of every reputable dealer in the city. They know he will not reject their horses, provided they are useful for the purpose required. I also noticed that he apparently has no whims or prejudices, and is not married to any particular breed or color. The result of this is that every dealer in the city is ready to sing his praise at every opportunity, which goes a long way toward keeping up his reputation. I know another veterinarian who is universally disliked by the dealers, and they will miss the sale of their horses rather than see them go before him for examination. He starts out on an examination with the idea of finding something on which to reject the horse, and usually accomplishes his aim. Another veterinarian is almost afraid to pass a horse for fear something will happen for which he will receive the blame. I once received a horse from the country which was a fine specimen of his class. His conformation was superb, his action faultless; he was a coach horse in every sense of the word, and such a horse as one would strive for months to find. He had a small insignificant splint, slight wire mark on the pastern, his mouth had been forced probably three months to a five-year-old, and there was a small scar on the cornea of the left eye. Many offers were received for the horse, and finally he was disposed of for \$600. The buyer had been looking for two years for just such a horse. He bought him subject to veterinary examination. The doctor overlooked the splint, spot in the eye, and wire mark, but called him a four-year-old. As the gentleman disliked to part with such an animal he called a second doctor, who passed him on age, speck in the eye and splint, but could not stand the wire mark. A third doctor was called, who accepted the wire mark and age, but noticed the scar on the eye, and the splint would surely produce lameness inside of six weeks. The horse was returned and I was branded as a swind.

ler. I to
months, a
otherwise
and to pa
has been
day. No
man aga

So go
erinary e
His reaso
There is
and their
spection.
class of d
horse so
good. For
technical
fessional
of his op
confidenc
his life t
practical
gelding o
mouse-co
skin, or a
bread so
erinarian
of people
like man
tised. A
U. S. Go
draft hor
plainly s
men aro
was not
would re
examinin
and reject
men, and
suffer fo
other ab

The
ness: F

ler. I told the gentleman to take the horse and use him three months, and if at any time he felt like paying for him to do so; otherwise to return him to me at the end of the three months, and to pay whatever he wished for the use of him. The horse has been paid for and is one of the finest on the north side to-day. No veterinary surgeon will ever examine a horse for that man again.

So good a buyer as Mr. John Dupee has dispensed with veterinary examinations entirely and now examines his own horses. His reason is that they kept him from buying a good horse. There is a class of dealers who work nothing but a skin game and their horses seldom if ever go before a veterinarian for inspection. They know what will happen. There is another class of dealers who handle nothing but the very best, and every horse sold is warranted, and they will make their warranty good. For a veterinarian to reject one of their horses on a mere technicality or personal whim, is to drive a nail in his own professional coffin. The chances are the horse will be sold in spite of his opinion and should it prove satisfactory, the buyer loses confidence in the doctor. I know a doctor who has noticed all his life that horses with three legs that are white are of little practical value. The specifications for cavalry horses say, "a gelding of uniform or hardy color," when as a matter of fact a mouse-colored horse with a black stripe down his back, a buckskin, or a roan, is no better or tougher than the soft bay, gingerbread sorrel, or the despised horse with three white legs. Veterinarians are criticised by dealers more than by any other class of people, and one who does not go about a horse in a horseman-like manner, is put down as a professional fool and is so advertised. A short time ago a doctor holding a position with the U. S. Government was called to the stock yards to examine a draft horse. The horse had a pronounced curb, which could be plainly seen at quite a distance. There was a crowd of horsemen around and every one of them saw the curb. The horse was not expected to pass the doctor, and it was supposed he would reject him at first sight. He spent nearly a half hour examining every point about the horse, and finally saw the curb and rejected him. A smile passed over the faces of the horsemen, and the rest of the veterinary profession no doubt had to suffer for this man's shortcomings. I could mention many other absurdities which I have observed, but these will suffice.

The following is my method of examining a horse for soundness: First of all I never examine a horse in harness, as it

covers defects and the horse may have been warmed out of lameness. I watch him as he is being backed from the stall, to see that he is not vicious, a halter puller or crampy. Standing at a reasonable distance, say, eight or ten feet, and walking around the horse a general view of the outlines can be had. In this way any prominent defect is discovered, and it is not necessary to go any farther. Not discovering anything the horse is led to the door. Just before passing out of the door, I examine the eyes and mouth. The light at this point is just right to reveal any defects of the eyes. The horse is then walked and trotted at the halter. I always stand directly in front when the horse is coming toward me, watching the front limbs only, likewise the hind ones as he goes away. In passing, his knee and hock action is observed. His gait being perfect, I then examine him in a methodical manner, commencing at the nose and going over each section. This is repeated on the opposite side. He is then turned short and backed for string-halt, after which, he is put in harness and run for his wind.

DISCUSSION.

Dr. Campbell: Dr. Hawley mentioned the case of a veterinarian who was very much liked. What would he do in the case of the \$600 horse that had a splint?

Dr. Hawley: He would pass the horse. I mentioned that the horse had but a small insignificant splint.

Dr. Merrilat: I would like to have Dr. Hawley again describe his remedy for a halter-puller.

Dr. Hawley: It is very simple, a rope is passed around the body of the animal over the back and between the front legs and then through the halter ring and fastened to the manger.

Dr. Merrilat: This paper is one of the best that I have ever listened to. It is full of practical suggestions that are original deductions from personal experience and I hope it will be published. There is one point about side-pulling on which I have my own ideas. The doctor mentioned that side-pulling is due more to a sore mouth than to anything else, while I find it to be quite different. In many side-pullers we do not find anything wrong. I think it is due to the cleverness of the horse. He is naturally ambitious and knowing that when he turns his head a little to one side he can take advantage of the driver. He wants to go ahead faster than the driver is willing to allow him. The remedy is simple. An apparatus consisting of a leather washer with tacks driven through it, generally cures the horse. There is also another side-puller that ought to be called

side-goer
one side
experien
to go to
pullers
able.

Dr.
and ack
heard.
What w
refuses
horse for
minutes
Would i
least 24

Dr.
some vet
very oft
the valu
time spe
horse I
horse, an
in posses
in harne
what is
horse sh
many de

Dr.
horse dea
to be rep
pronoun
him \$20
and my p
saying th
This was
nounced

Dr. G.
had a s
was a sc

Dr. I.
Dr. G.
nary wor
he had a

side-goer. He does not pull much, but he insists on going to one side of the street. Such a horse is incurable, as far as my experience goes. No matter what you do for him, he continues to go to one side. Therefore, I consider side-goers and side-pullers as quite different, and believe the former to be incurable.

Dr. Walker: I am quite interested in Dr. Hawley's paper, and acknowledge that it is one of the best that I have ever heard. He states that he never examines a horse in harness. What would he do in a case where the horse owner absolutely refuses to have the harness taken off? In examining a \$1000 horse for instance, do you think by taking this horse out for 15 minutes you could determine that this horse is not crampy? Would it not be better to have him in your possession for at least 24 hours?

Dr. Hawley: I referred to the absurdities indulged in by some veterinarians in making an examination for soundness; very often making a laughing stock of themselves. Certainly the value of the animal has some bearing upon the length of time spent in making an examination. In examining a \$1000 horse I would naturally be more particular than with a \$50 horse, and in a high priced horse it is preferable to have same in possession for at least 24 hours. As far as examining them in harness is concerned, there is no dealer that wants to do what is fair that ought to object to its being taken off. No horse should be examined with the harness on, as it covers many defects.

Dr. Walker: A veterinarian has to be very careful with horse dealers. One of my clients went to one of the supposed-to-be reputable horse dealers to look at a horse. The dealer pronounced the animal as perfectly sound. My client offered him \$20 down, the balance to be paid upon my examining him and my pronouncing animal sound. To this the dealer objected, saying that I had a dispute with him over an animal before. This was not true. Another veterinarian was called, who pronounced the animal unsound.

Dr. Quitman: Regarding the \$600 horse you mention that had a scar on the cornea. Can you be positive whether it was a scar or an opacity?

Dr. Hawley: Yes.

Dr. Quitman: I examined a horse some time ago, an ordinary working horse. He was sound in every particular except he had a very small opacity in the cornea. I examined him

carefully to see if any signs of periodic ophthalmia were present. I passed the horse and regret it ever since. That horse had periodic ophthalmia.

Dr. Hawley: Why did you pass the horse?

Dr. Quitman: To do justice to the dealer as well as to the buyer. We often find horses with such opacities, or rather specks which are all right. Possibly this horse was prone to periodic ophthalmia.

Dr. Hawley: Then you did an injustice to the buyer.

Dr. Ryan: In regard to this speck in the eye, I think any scar or speck causes a defect of vision. If it was very close to the sclerotic it would not cut much figure. But if there is any speck within the cornea I would not hesitate to pronounce him unsound.

Dr. Hughes: I think we should all join Dr. Merrillat in congratulating Dr. Hawley on his paper. It deserves every consideration and I hope to see it published. I would like to hear an expression of opinion in regard to the nature of cribbing. I would like to know whether it is possible for such an animal to actually swallow air and inflate himself. With regard to weaving, what is a weaver anyhow? What is the cause of it? Is it a nervous disease? If it is what authority is there for saying so? Physicians often ask us these questions and it is a slur on us not to be able to answer these questions satisfactorily.

Dr. Campbell: Dr. Merrillat will read on weaving and cribbing.

Dr. Hughes: If such is the case, I withdraw my questions.

Dr. Robertson: In regard to the scar in the eye. Another thing I would like to know about. There are some operators that operate on periodic ophthalmia. At the time of operation there was a distinct scar on the eye. The operator assured me that after he operated on the eye there would be positively no return of the ophthalmia. Even if the eye was clear from opacity and only the scar from the operation I am dubious whether I would be justified to pass such a horse. I had a horse with a speck in the eye and he would at times jump as if surprised by something being due to interference with his vision and I think that a veterinarian cannot be too careful in such cases, and attention of the buyer should be called to such specks or scars whenever there are any.

Dr. Quitman: What was this operation you refer to and how would it prevent further ophthalmia?

Dr. A.
them had
attack, w
The oper
and scler
chamber
fills up a

Dr. A.
pronounc
want it u
ing the c
the effect
the horse

Dr. A.
new in t

Dr. A.
clinics a
pus accu
cast and
Since th
this line
median l
rynx are
bistoury
from beh
tine bon
tubes wi
easily m
roof of t
fingers
broken i
on an an
number l
soft pala
convenie
palate ce
ber of s
in a stan
lum.

Dr. A.
perature

Dr. A.
high ope

Dr. Hughes: In five cases that I operated upon three of them had subsequent attacks. One of them had no subsequent attack, while the fifth one I have not been able to keep track of. The operation is very simple. Make an incision of the cornea and sclerotic junction and liberate the contents of the anterior chamber. The eye collapses when the humor is liberated and fills up again in four or five days.

Dr. Hawley: In regard to Dr. Ryan's statement as to his pronouncing a horse with a speck in the eye unsound. I don't want it understood that I was in any way criticising or defending the opinion of the veterinarians. I just wanted to show the effect that these opinions had on the buyer. One rejected the horse on account of the eye, while the other passed him.

Dr. Robertson: Is there any member who has anything new in the way of operations to report?

Dr. Merrillat: About a year ago we had presented at the clinics a case of chronic nasal discharge, which was diagnosed as pus accumulation in the guttural pouches. The animal was cast and the pus removed by operating through the fauces. Since that time I have made a number of experiments along this line. We have shown that by cutting the soft palate in the median line throughout its whole extent operations in the pharynx are comparatively simple. The hand containing a curved bistoury is passed through the fauces and the soft palate is cut from behind forward from the base of the epiglottis to the palatine bone. The fingers can then be inserted into the Eustachian tubes with ease and an examination of the guttural pouches easily made by palpation. If they are found to contain pus the roof of the pharynx is cut in the median line. This admits the fingers between the guttural pouches. The abscess is then broken into with the fingers. The first operation was performed on an animal in a recumbent position, but since that time a number have been operated upon in the standing position. The soft palate never reunites, but the animal seems to suffer no inconvenience therefrom. This new procedure of cutting the soft palate certainly opens a new field for diagnosis if not for a number of surgical operations. The operation can be performed in a standing posture by the aid of a good substantial speculum.

Dr. A. M. Casper was to have presented a paper on "Temperature," but failed to appear.

Dr. Allen reported a case of hoof sloughing following the high operation of neurectomy.

Dr. Hughes mentioned two cases of sloughing of hoofs in mules following the same operation, and gave as his opinion that every time you neurectomize a mule you get a sloughing of the hoof. He also mentioned a case of a race horse that had been sent to his infirmary from Washington Park track. When he arrived at the hospital the boy who had him in charge was carrying the hoof under his arm.

JOSEPH B. CLANCY, *Secretary.*

MONTREAL VETERINARY MEDICAL ASSOCIATION.

The regular meeting was held in the Library of the College on the evening of November 3d. The President, Dr. Adami, occupied the chair, and there was a fair attendance of members, supplemented by the presence of the Hon. President, Dr. D. McEachran, Prof. Mills, Dr. Alloway, Dr. Gunn, Dr. Moore and Dr. Sugden.

After disposing of routine business the Chairman called upon Mr. Kato, who presented to the society his essay on "Eclampsia." The word eclampsia (derived from the Greek), meaning to shine or burst forth, was used by some authors at a very remote period and is now the term commonly applied to cramp or convulsion of involuntary muscles, occurring after parturition. It is generally believed that the disease attacks mostly bitches. Opinion as to its cause is very varied, but that the symptoms result from a disordered nervous system is beyond question, but it is very difficult to determine the cause of this condition. Like the other tissues of the body the nerves undergo a process of degeneration and repair, and it is possible that in this disease the materials proper for this repair are not circulating in the blood vessels, and thus bring about this disorderly action of the nervous system, which system must always be considered as an important factor, especially in such diseases as eclampsia. The dogs most susceptible were skye terriers, Yorkshires, spaniels and collies and the various toys. This increased susceptibility was probably due to their excessive sensibility to external influences, such as excitement, worry, etc. Mr. Kato then described the symptoms as seen in a case which came under his own notice. Despite the severe nature of the disease, consciousness is not lost, and one may often observe an animal try to wag its tail when called by name. An attack may last for 24 hours or more, but with varying intensity during that period. In mild cases recovery takes place without treatment. On the other hand, if the attack be an acute one, the patient may fall

into a comatose condition and die in a very short time. A sedative treatment is indicated and for this purpose we may use hypodermics of morphia, the administration of chloral hydrate, bromide of potassium or inhalations of chloroform. Warm baths, followed by massage, often relieve spasms and release tense muscles. An oleaginous laxative may always be given with benefit. Mr. Kato, in conclusion, said that a dark, quiet, well-ventilated place was infinitely better for the patient than noisy surroundings, and that the prognosis was fairly favorable provided that the patient be attended at the proper time with energetic measures.

Before making any remarks on the subject of eclampsia Dr. McEachran complimented the essayist on the excellent paper which he had read and upon the exceedingly good manner in which it was delivered, in what was to Mr. Kato a foreign language. Dr. McEachran had most frequently seen eclampsia in bitches left with too many pups to suckle, the excessive secretion of milk causing a depletion of the blood, which resulted in an ænemic condition of the various nerve centres. Treatment was, as a rule, attended with success and the disease need not be looked upon as a formidable one by the young practitioner.

Before closing his remarks Dr. McEachran extended on behalf of the society a very hearty welcome to Dr. Alloway, who subsequently made a few remarks, commencing by recalling his early days in college, he having purchased the animal whose skeleton now adorns our lecture room, some thirty-one years ago. Dr. Alloway, who has recently returned from the Western States, spoke of the comparatively high value of dogs in those regions and pointed out to the students the necessity of their giving up the old habit of devoting all their attention to the study of the equine race. Dr. Mills also complimented Mr. Kato, and, in continuing, said that he had found the Japanese spaniels more delicate than any other of the toy breed. He had never had a case of eclampsia in his own kennels, which fortunate state of affairs he attributed to his bitches being regularly exercised and never being allowed to suckle too many pups. Before taking up the subject of eclampsia, Dr. Adami expressed his pleasure at being with the society once more. Eclampsia of the bitch differed very widely from eclampsia of the human subject, although in both the condition was closely allied with the puerperal state; in the human being it was a far more serious disease. Observations now seemed to point to some alteration of the blood. As we pass along we must search for

a solution of the problem. Patches of coagulated necrosis were commonly seen in the liver, more frequently in this than any other disease. These might possibly be due to thrombosis. So far no bacteria have been found in them, and it is supposed that this condition may be produced by toxine. Hitherto all attempts at finding a specific microbe have failed.

Mr. Groves then reported the following interesting case :

The subject, a male dog, ten years old, of spaniel breed, brought to the college for treatment. History.—The dog being unable to walk in a straight line, and often falling down and lying down more than usual. This condition was noticed for about two weeks; the symptoms presented were a general debilitated condition, coat rough and dry, the tongue protruding from the left side of the mouth; the neck was straight and sometimes inclined to the left; the body resembled the segment of a large circle, with its centre on the right side, lameness in the right foreleg and general paresis. Diagnosis.—Pressure on base of the brain, probably a tumor. Prognosis unfavorable. Treatment.—Useless, but the owner desired that we should do something, and he was given *nux vomica*, iodide of potash and gentian. Two months afterward the animal was brought back to be destroyed. The symptoms were much aggravated, the dog lying most of the time, but he could get up and when he tried to go fast fell down. When standing would brace himself against some object and when walking would walk almost sideways, always going to the right. His head was turned on its axis from the right to left, the right side being the highest. This was not continually the case, for he would at times hold his head straight. His vocal power was lost and he had difficulty in swallowing. Sight was not impaired. The dog was chloroformed and post-mortem held, which resulted as follows: The various organs of the body were found to be normal, but on the inferior part of the medulla there was found a tumor about the size of a marble. It was attached closely to the wall of the foramen magnum, so that it had to be separated with a knife. It was semi-circular in form, with a broad base.

Dr. Gunn considered this an operable case and a surgeon would have been guided to the right lobe of the cerebellum as the seat of tumor. The diagnosis would have been wrong, but the surgeon's incision would have been over the tumor, which could have been shelled out with a possible good result. The recognized symptoms of the disease of the cerebellum are almost exactly those given by Mr. Groves, viz.: (A) Rotation of

the body
The neck
Bending
(D) Mor
case. (I
The rela
have bee
bellar tr
are repo
Dr. M
and ear
held up
had unf
dog.

After
journe

The
Library
Preside
present
and Su
disposi
Dr. Su
Subject
been ta
street,
great p
college
ministe
in the
jected,
another
moani
the reg
violence
this pa
with 3
violence
desper
had no
A C
minut

the body away from the line on the opposite side to tumor. (B) The neck was twisted and chin turned to side of tumor. (C) Bending of the body, the concavity being on the affected side. (D) Monobrachial paralysis, which is not very definite in this case. (E) Eye symptoms were not much observed in this dog. The relative size of the pupils was different, but there seems to have been no mystagmus nor strabismus, as is common in cerebellar trouble. Convulsive and choreic seizures and vomiting are reported as absent here, but usual in pure cerebellar trouble.

Dr. Mills regretted that the symptoms produced in the eye and ear were not more closely noted, and said that the views held upon functions of the cerebellum were very divergent. He had unfortunately never seen a case of cerebellar disease in the dog.

After a few words from the Chairman the meeting adjourned.

The regular meeting of this association was held in the Library of the College, on the evening of November 17. The President, Dr. Adami, occupied the chair. There were also present the Hon. President, Dr. D. McEachran, and Drs. Baker and Sugden. After reading the minutes of the last meeting and disposing of other routine business, the Chairman called upon Dr. Sugden for his case report on "Intestinal Obstruction." Subject was a collic bitch, seven months old. This dog had been taken suddenly and noticeably ill, while playing on the street, uttering most heartrending cries and showing signs of great pain. She was given morphia, gr. ss, and brought to the college. Enemas were used freely and a dose of castor oil administered. Temperature 107. As the pain had not moderated in the slightest degree, another dose of morphia, gr. ss, was injected, and this seemed to have no effect; so in 20 minutes another dose of same size was given. All the time the dog was moaning and frequently yelling with pain, while pressure over the region of the stomach increased the pain and produced violent straining. Feeling that a foreign body was the cause of all this pain, she was given another dose of castor oil, combined with 30 drops of tincture of opium. The dog had now been in violent pain for two hours, and, beginning to feel somewhat desperate, he gave her another dose of morphia, gr. ss, but this had no effect; and she was then put under the influence of the A C E mixture, which kept her unconscious for about 70 minutes, by which time the morphia had produced the desired

effect. This was about 10.30 P. M., the dog having had the first dose about 8 o'clock. At half-past-one she was sleeping, only emitting an occasional groan. The next morning, to his surprise, he found her alive and in a semi-conscious condition, but apparently free from pain. At 8 o'clock she was given a little beef tea, and shortly afterwards her bowels moved slightly; and by evening she was sufficiently recovered to walk around, and her owner took her home, as he did not want to go to any further expense. Dr. Sugden heard that the next morning she passed a potato as big as a pigeon's egg and a worm which the owner described as being 6 to 8 inches long, with a green back and white belly; but, unfortunately, both potato and worm had been thrown away. Dr. Sugden saw the patient since her removal and she was enjoying the best of health.

This was followed by an essay by Mr. Gellatly on "Meat and Milk of Tuberculous Animals as a Menace to Public Health," which proved to be a most interesting and valuable paper. He considered this as compared with other diseases to which man is liable, to be the one which must be recognized as deserving the greatest attention from sanitarians, health officers, and physicians. It was found to be one of the oldest diseases mentioned, as Moses in his law forbade the consumption of the meat of animals affected by "phthisis," and at later dates frequent mention relative to this disease was made. Tuberculosis was found to exist in every type and breed of cattle, and found its easiest victims among those kept especially for milk purposes. The homes of the wealthiest as well as those of the poorest testify that our meat and milk supply cause thousands of deaths from this disease every day. If all the victims of consumption who die annually lived in one country, newspapers would be crowded with stories about the most dreadful pestilence that ever visited the earth. Insurance companies could testify that a great proportion of the deaths in their respective orders were due to tuberculosis, and these deaths were found to be among men who had been examined as to their soundness when admitted to the order and found healthy. Some may have had latent tuberculosis when examined; but it can be proven that many contracted the disease after examination, and can be traced to the ingestion of milk and meat of tuberculous animals.

Mr. Gellatly cited instances from observation recorded by various authors who had proved that the germ of tuberculosis existed in milk. It was also shown to have lived in butter for

a period of
days. A
ing a seri
on the mar
one-fifth of
can be tra
had not be
tracted fro
experimen
with the d
Heat, he s
up to a cer
and in coo
to a suffici
on to disc
ous ways
no doubt
man obtai
tuberculo
would no
pages 7, 8
Eachran,
said that
opinion s
even if he
his fellow

The C
and deliv
by valua
who said
thirty ye
cattle on
time he r
gical Soc
as comm
again rea
found no
and the
was look
ble from
Dr. A
udder in
ducted b

a period of 120 days, and in cheese for as long as thirty-five days. A Berlin bacteriologist had been successful in inoculating a series of 250 guinea pigs from butter purchased at random on the market place, and pathologists had found that at least one-fifth of the consumptive diseases prevalent among children can be traced to the infection of milk. Mr. Gellatly said it had not been fully demonstrated that the disease could be contracted from eating meat of tuberculous animals, but numerous experiments had been successful in inoculating various animals with the disease from the juice pressed out of underdone steak. Heat, he said, might destroy the vitality of the bacilli if carried up to a certain point, but in many cases meat was preferred rare and in cooking meat in joints a great part of it was not raised to a sufficient degree to destroy the bacilli. Mr. Gellatly went on to discuss the contagious nature of the disease and the various ways it could be transmitted, but contended that there was no doubt but that the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter. As to the remedy, the essayist said he would not suggest anything further than that laid down on pages 7, 8 and 11 of a little pamphlet published by Dr. McEachran, entitled "Tuberculosis in Cattle." In conclusion, he said that the veterinary surgeon when called upon to give his opinion should consider the sacredness of his position, and, even if he chance to offend his client, should do his duty toward his fellow man.

The Chairman complimented the essayist on the preparation and delivery of his paper, and a discussion ensued, strengthened by valuable information from the President, Dr. McEachran, who said that his attention had been called to the disease about thirty years ago, when he found that the disease existed among cattle on the farms in the neighborhood of Montreal. At that time he read a paper on the subject before the Medico-Chirurgical Society, but very few at that time recognized the disease as communicable from animal to man. A few years ago he again read a paper before the same society on the subject, and found not a single dissenting voice from any of his remarks, and the true nature of the disease was better understood and was looked upon as very dangerous, and readily communicable from animal to man.

Dr. Adami said it was not necessary to have lesions in the udder in order to have bacilli in the milk. In experiments conducted by Dr. McEachran and himself, that in the case of seven

out of ten cows affected by the disease and without lesions in the udder, they found the milk virulent and on inoculation produced the disease; but that we could have the disease acquired *in utero*, as Prof. Bang had found lesions in the liver of newly-born calves.

Mr. Groves was appointed essayist for the next meeting, and Mr. Hammond to report a case.

There being no further business, the proceedings closed.

JAS. MCGREGOR, *Secretary-Treasurer*.

VETERINARY MEDICAL ASSOCIATION OF NEW YORK COUNTY.

The regular annual meeting of the Veterinary Medical Association of New York County was called to order Wednesday, December 7th, in room 37, New York Academy of Medicine, at 8.45 P. M., by President Robertson.

On roll-call the following members responded: Drs. Ackerman, Bell, J. S. Cattanch, Clayton, Dickson, Delaney, Ellis, Farley, Gill, Grenside, Goubeaud, Hanson, Lellman, O'Shea, and Robertson. As visitors, Prof. Olof Schwarzkopf, Borough of Queens; Drs. Jno. J. Hayes, L. Nicholas, Wm. M. MacKellar, and Chas. Hall, Borough of Manhattan; also Wm. H. Hayes, John Hayes, Jr., Clifford Atkins, J. William Fink, Harry Hamlin, Warren Fretz, and W. A. Young, students American Veterinary College.

The minutes of the previous meeting were then read, approved and ordered placed on file.

The Board of Censors then recommended for membership in the association the names of Chas. E. Clayton, D. V. S., graduate of the American Veterinary College, whose application had come before them in regular form, with Robert W. Ellis and Jas. L. Robertson as vouchers, and Geo. J. Goubeaud, D. V. S., graduate of the American Veterinary College, whose application was also in regular form, with E. B. Ackerman and R. R. Bell as vouchers.

An application for honorary membership in the association, approved by the Board of Censors, was also presented as follows:

ACADEMY OF MEDICINE, NEW YORK CITY, Dec. 7, 1898.

According to Art. X. of the Constitution and By-Laws of the Vet. Med. Ass'n of New York Co., we hereby propose for honorary membership, Hon. Timothy P. Sullivan, of New York County, Borough of Manhattan. The gentleman aided this Association in the passage of the bill exempting the veterinary surgeons from jury duty.

He had

Drs. C
association
ber of the

Dr. L
cephalus
the spec
which fol
from the
President.

Dr. G
paper ent
Treatment
opened u
generally
thanks wa

The J
Committee
called up

WHERE
Dr. William
erinary pro
record thei

Resolved
leaves a va
profession.

Resolved
and also be

Resolved
sent to the

Dec. 8, 1

Moved
on file.

Ways
to contin
the associ
The usual

* Will be
† Publish

He had the bill passed in the Assembly, this year, 1898.

(Signed) { ARTHUR O'SHEA,
H. D. GILL,
ROSCOE R. BELL,
J. L. ROBERTSON.

Drs. Clayton and Goubeaud were declared members of the association, and Hon. Timothy P. Sullivan an honorary member of the same.

Dr. Lellman then read a very scientific paper on "Hydrocephalus in the Horse,"* with microscopical demonstrations, the specimens being exceptionally fine. After the discussion which followed, a vote of thanks was tendered to Dr. Lellman from the association, as well as one personally expressed by the President.

Dr. Goubeaud, of the Borough of Brooklyn, then read a paper entitled "A New Method of Employing Charcoal in the Treatment of Acute Indigestion in Horses."† This paper opened up a field for animated discussion, which was pretty generally indulged in by the members. A hearty vote of thanks was tendered to Dr. Goubeaud.

The Judiciary Committee having nothing to report, the Committee on Resolutions on the death of Dr. Machan was called upon by the President, and offered the following report:

WHEREAS, It has pleased the Almighty to remove from our midst Dr. William Machan; and, whereas, our relations with him in the veterinary profession makes it fitting that the members of this Society record their appreciation of him; therefore

Resolved, That the very sad and sudden removal of such a man leaves a vacancy that will be deeply realized by the members of the profession.

Resolved, That we express deep sympathy with the afflicted relatives, and also be it

Resolved, That this be spread in full in the minute book, a copy be sent to the relatives, and published in the veterinary journals.

(Signed) { H. D. HANSON, D.V.S., *Chairman*.
H. D. GILL, V.S.
J. L. ROBERTSON, M.D.V.S.

Dec. 8, 1898.

Moved and seconded that the same be accepted and placed on file. Carried.

Ways and Means Committee, Dr. Bell, Chairman, promised to continue his very interesting programmes, samples of which the association have been enjoying for several meetings past. The usual routine of business being concluded, and this being

* Will be published in an early issue of the REVIEW.

† Published elsewhere in this issue.

the annual meeting, elections of officers for the ensuing year of 1899 was next in order.

Dr. H. D. Gill, after a few very neat and fitting remarks, nominated for President Dr. James L. Robertson. The nominations being immediately closed, the by-laws were suspended and Dr. Robertson was elected by acclamation. The same course was pursued with the rest of the nominees, which resulted in the election for Vice-President of Dr. H. D. Gill, for Secretary Dr. Robert W. Ellis, and for Treasurer Dr. H. D. Hanson.

Dr. Hanson, who had served in the capacity of Treasurer during the year just ended, then rendered a "Treasurer's report." Moved and seconded that the report be accepted. Moved and seconded that the meeting adjourn.

ROBERT W. ELLIS, *Secretary*.

ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION.

The sixteenth annual meeting was held at the Sherman House, Chicago, November 16 and 17, and was called to order at two o'clock P. M., Dr. Babb, the President, in the chair. The following members answered to roll-call: Drs. Babb, Baker (A. H.), Baker (S. S.), Campbell, Martin, Gyzell, Walker, Sigrosser, Nattress, Quitman, Robertson, Welch, Hughes, C. A. Pierce and Brown.

The minutes of the preceding meeting were read and approved. Report of the Secretary showed a gain of seven new members.

Dr. W. J. Martin, of Kankakee, read a paper on interesting cases in practice,* which elicited a full discussion.

The following new members were proposed and elected: Dr. Albert C. Worms and Dr. Christ F. Griener.

Dr. Robertson gave us quite a dissertation on a case of tetanus in the horse.

A communication was read from Dr. A. T. Peters, of Nebraska, requesting an opinion as to the advisability of forming a Trans-Mississippi Association. Moved by Dr. A. H. Baker, seconded by Dr. Quitman: That it is the sense of the meeting, that the forming of such an association would be detrimental to the profession and the National Association. Moved by Dr. Sigrosser, seconded by Dr. Walker, that the discussion on the subject be deferred till the 17th. Carried.

* One of Dr. Martin's case reports is printed elsewhere in this issue.

On mot
Novem
President
Co., read a
Remedies,
seconded b
Cox for his
Moved
we are wai
officers for
Drs. Walk
being in o
by Dr. S. S
Welch, tha
instructed
Carried.

Dr. W
name of I
seconded b
tary be ins
Dr. Na
Dr. S. S. I
by Dr. Bro
be instruct
Carried.

For Tr
Dr. R. G.
by Dr. Sig
cast the ba

For Bo
man), Bro
S. Baker.
the nomin
cast the ba
of ballots,
acclamation

The m
The m
Dr. A.
the past y
Veterinary
bled: In
Dr. Quitm

On motion meeting adjourned.

November 17.—The meeting was called to order by the President at 11 o'clock A. M. Dr. Cox, of the Pasteur Remedy Co., read a very interesting paper on "Modern Therapeutic Remedies," in place of Mr. Harold Sorby. Moved by Dr. Welch, seconded by Dr. Martin, that a vote of thanks be tendered Dr. Cox for his interesting paper. Carried.

Moved by Dr. Walker, seconded by Dr. Nattress, that while we are waiting for the essayists to arrive, we proceed to elect officers for the ensuing year. Carried. The Chair appointed Drs. Walker and Nattress as tellers. Nominations for President being in order, Dr. W. J. Martin, of Kankakee, was nominated by Dr. S. S. Baker. Moved by Dr. Walker, seconded by Dr. Welch, that the nominations close, and that the Secretary be instructed to cast a ballot electing Dr. Martin unanimously. Carried.

Dr. Walker placed in nomination for Vice-President the name of Dr. C. A. Pierce, of Elgin. Moved by Dr. Nattress, seconded by Dr. Welch, that the nominations close and the Secretary be instructed to cast the ballot. Carried.

Dr. Nattress placed in nomination for Secretary the name of Dr. S. S. Baker, of Chicago. Moved by Dr. Welch, seconded by Dr. Brown, that the nominations close and that the Treasurer be instructed to cast a ballot electing Dr. Baker unanimously. Carried.

For Treasurer, Dr. Brown placed in nomination the name of Dr. R. G. Walker, of Chicago. Moved by Dr. Pierce, seconded by Dr. Sigrosser, that the nominations close and the Secretary cast the ballot. Carried.

For Board of Censors, the names of Drs. Nattress (Chairman), Brown and Worms were placed in nomination by Dr. S. S. Baker. Moved by Dr. Walker, seconded by Dr. Griiner, that the nominations close and that the Secretary be instructed to cast the ballot. The Secretary having cast the requisite number of ballots, the Chair declared the new officers duly elected by acclamation.

The meeting then adjourned for dinner.

The meeting reconvened at 2 o'clock P. M.

Dr. A. H. Baker, as Chairman of the Board of Censors for the past year, read the following report: "To the Illinois State Veterinary Medical Association, in annual convention assembled: In the matter pertaining to the charges preferred against Dr. Quitman, a member of our honorable body, the Board of

Censors beg leave to make the following report, viz.: Dr. Quitman appeared before the Board of Censors, and acknowledged the justice of said charges, stating that he was sorry, and had already stopped the irregular advertising. The Board of Censors, therefore, recommend that he be acquitted and placed in good standing again. [Signed] A. H. Baker and W. H. Welch." Moved by Dr. Sigrosser, seconded by Dr. Walker, that the report be adopted as read. Carried.

Dr. A. H. Baker read a very exhaustive paper on the "Pathogenesis and Pathology of Colic," which brought out a lengthy discussion.

Dr. Hughes' paper being called for, the doctor stated that, on account of his very extensive practice, he had been unable to prepare a paper, but that he would give us a report of a few cases that were out of the ordinary run, which he did in his inimitable way. After the discussion closed, Dr. Babb, the retiring President, introduced his successor, Dr. Martin, who on taking the chair said he would endeavor to fill the position as well, if not better, than his predecessors.

Dr. Peters' communication was reread for the benefit of those who had not heard it. After liberal discussion, it was moved by Dr. A. H. Baker, seconded by Dr. Welch, that we as a body decline to participate in the formation of a Trans-Mississippi Association, and that the Secretary be instructed to notify Dr. Peters to that effect. Carried.

Moved by Dr. A. H. Baker, seconded by Dr. Quitman, that we amend Section I, Article XIV, so that it will read: Each applicant, on being admitted to membership, shall pay a fee of three dollars, and shall annually thereafter pay one dollar in advance to the Association. Laid over till next meeting.

The following resolution was offered by Dr. A. H. Baker:

Resolved, That we do hereby protest against the action of the United States Patent Office in having granted letters patent to one Emil Behring, covering the method of producing diphtheria antitoxin serum in the United States; and, whereas, it is the opinion of this Association, that the said Emil Behring is not the original discoverer of the method whereby diphtheria antitoxin serum is now produced; and it is further

Resolved, That it is a wrong to suffering humanity to grant a monopoly to the said Behring in the manufacturing of diphtheria antitoxin serum, and we ask, as a matter of common justice, that the patent granted to Emil Behring be revoked; and it is further

Resolved
records of
member of
Moved
resolution
Moved
mittee on
pointed to
medicine
Moved
annual m
On m

VERMO

It giv
organized
Veterinar
at Mont
F. A. Ri
D. V. S
Montpel
urer. Ex
ton; J. I
V. S., M
D. V. S.
mittee o
C. L. M

The
organiza
officers
the right
able the
veterina
mont lav
be the
protectin

AMERI

Pres
Residen

Resolved, That a copy of the resolution be spread upon the records of this Association, and that a copy be sent to each member of Congress from Illinois.

Moved by Dr. Sigrosser, seconded by Dr. Walker, that the resolution be adopted as read. Carried.

Moved by Dr. Hughes, seconded by Dr. Welch, that a Committee on Legislation, consisting of twelve members, be appointed to draft a bill regulating the practice of veterinary medicine in this State. Carried.

Moved by Dr. Babb, seconded by Dr. Nattress, that the semi-annual meeting be held in Springfield. Carried.

On motion meeting adjourned.

S. S. BAKER, *Secretary*.

VERMONT STATE VETERINARY MEDICAL ASSOCIATION.

It gives me great pleasure to inform you that Vermont has organized an association under the name of Vermont State Veterinary Medical Association. The first meeting was held at Montpelier, Vt., Oct. 25th, and the officers elected were: F. A. Rich; V. S., M. D., Burlington, President; H. W. Burgess, D. V. S., Bennington, Vice-President; Ian W. Parks, V. S., Montpelier, Secretary; H. Buss, V. S., St. Johnsbury, Treasurer. Executive Committee:—G. A. Miller, D. V. S., Burlington; J. F. Page, D. V. S., Manchester Centre; E. W. Culley, V. S., Morrisville; H. Buss, V. S., St. Johnsbury; J. C. Parker, D. V. S., St. Albans; W. L. Adams, V. S., Hardwick. Committee on Credentials—H. W. Burgess, D. V. S., Bennington; C. L. Morin, D. V. S., St. Albans; A. B. Gay, V. S., Randolph.

The meeting was well attended and a success as a primary organization. No business was done except the election of officers and adoption of By-Laws. However, this is a step in the right direction, and it will elevate the profession and enable the members to work together for the advancement of veterinary science. There is no provision made in the Vermont laws for the protection of qualified practitioners. It will be the aim of this association to obtain such a law, thereby protecting the practitioner and the people.

IAN W. PARKS, V. S., *Secretary*.

AMERICAN VETERINARY MEDICAL ASSOCIATION.

President Clement has promulgated the following list of Resident State Secretaries: *Alabama*, R. H. Drummond, Bir-

mingham; *Arizona*, J. C. Norton, Phoenix; *California*, Fred C. Pierce, 1724 Webster St., Oakland; *Connecticut*, R. P. Lyman, 328 Asylum St., Hartford; *Delaware*, H. P. Eves, 507 W. 9th St., Wilmington; *District of Columbia*, A. M. Farrington, Dept. of Agr., Washington; *Georgia*, Geo. B. Blackman, Rome; *Illinois*, E. M. Nighbert, Mt. Sterling; *Indiana*, J. R. Mitchell, Evansville; *Iowa*, T. A. Brown, Chariton; *Kansas*, W. N. D. Bird, Arkansas City; *Kentucky*, J. W. Jamieson, Paris; *Louisiana*, W. H. Dalrymple, Baton Rouge; *Maine*, G. H. Bailey, Deering; *Maryland*, Wm. Dougherty, 1035 Cathedral St., Baltimore; *Massachusetts*, E. H. Holden, Springfield; *Michigan*, S. Brenton, 83 5th St., Detroit; *Minnesota*, C. E. Cotton, Minneapolis; *Mississippi*, J. C. Robert, Agricultural College; *Missouri*, Chas. Ellis, 3230 Locust St., St. Louis; *Montana*, M. E. Knowles, Butte; *Nebraska*, V. Schaefer, Tekamah; *New Hampshire*, Lemuel Pope, Jr., Portsmouth; *New Jersey*, J. P. Lowe, Bloomfield Ave., Passaic; *New York*, W. H. Kelly, 195 Western Ave., Albany; *North Carolina*, A. S. Wheeler, Biltmore; *North Dakota*, T. D. Hinebaugh, Fargo; *Ohio*, T. Bent Cotton, Mt. Vernon; *Pennsylvania*, W. H. Ridge, Trevese; *South Carolina*, Benj. McInnes, Charleston; *South Dakota*, M. J. Treacy, Fort Meade; *Tennessee*, Joseph Plaskett, 529 Broad St., Nashville; *Texas*, M. Francis, College Station; *Virginia*, E. P. Niles, Blacksburg; *Washington*, S. B. Nelson, Pullman; *West Virginia*, L. N. Reefer, 1406 Chapline St., Wheeling; *Canada*, W. J. Hinman, Winnipeg, Manitoba.

VETERINARY MEDICAL SOCIETY UNIVERSITY OF PENNSYLVANIA.

The fourth regular meeting of the year was called to order November 18th, at 8 o'clock. Mr. Taylor was appointed critic. After the transaction of the business pertaining to the welfare of the society and its members, the literary programme of the evening was next in order, and the society had the pleasure of being addressed by its honorary president, Dr. John W. Adams; his subject being "Flat Worms of Domestic Animals." The enthusiasm shown upon his being introduced and likewise at the end of his lecture clearly demonstrated the fact that the members were greatly pleased with it. An important feature of his discourse was the charts he used, making his subject better understood. A vote of thanks was extended to Dr. Adams. The meeting adjourned at 9.30 P. M.

The
Decemb
critic.
there w
jects re
names
and dul
9.50 P.

VETEE

The
of Octo
presidin
Mr.
Mr. G.
"The
read a p
and Mr.
The dis
teresting

The
21st. M
Joint"
scribing
read a g
ably dis
The on
cussion
treatme
mamma

The
prove o

E. M
ing nea
OSC
undert
OW

The fifth regular meeting of the year was called to order December 2d, at 8 o'clock. Mr. Cheney was appointed critic. This meeting was entirely a business meeting, as there was considerable matter pertaining to different subjects relative to the society's annual banquet, etc. The names of Messrs. Horner, Bassler and Hart were proposed and duly elected to membership. The meeting adjourned at 9.50 P. M.

L. A. NOLAN, *Secretary*.

VETERINARY MEDICAL ASSOCIATION OF ONTARIO VETERINARY COLLEGE.

The first meeting of this society was held on the evening of October 14th. Prof. A. Smith, F. R. C. V. S., the principal, presiding.

Mr. Wesley M. Goff read an excellent essay on "Bacteria"; Mr. G. Jerome brought forward a carefully-prepared paper on "The Progress of Veterinary Science"; Mr. F. J. Kernan read a paper on "The Examination of Horses for Soundness"; and Mr. J. Lee Shorey read a communication on "Neurectomy." The discussions following each paper were animated and interesting.

The second meeting was held on the evening of October 21st. Mr. Wentzele read an exhaustive paper on "Open Joint"; Mr. W. A. Sproule read a paper on "Castration," describing different methods of operating, and Mr. Charles Manning read a good paper on "Parturient Apoplexy." The papers were ably discussed by several of the members of the senior class. The one on "Parturient Apoplexy" elicited an interesting discussion on the new treatment of that disease called "Schmidt's treatment," and its cause ascribed to toxins developed in the mammary gland at that time.

These meetings and the discussions arising at them must prove of much benefit to the students attending the college.

W. M. GOFF, *Secretary*.

NEWS AND ITEMS.

E. BOVETTE, V. S., of Denver, Col., lost his life while fishing near that city in October.

OSCAR VERSCHELDEN, of St. Mary's, Kansas, conducts an undertaking business as a side line to veterinary science.

OWING to ill health, Dr. Harry V. Good, of St. Joseph, Mo.,

has retired from practice, and is now engaged as a life insurance agent.

THE question of municipal meat and milk inspection is being agitated in St. Joseph, Mo., and the organization of a system is reasonably certain.

MRS. JOHN FORBES and Mrs. Henry Washburn were interested listeners at the December meeting of the Missouri Valley Veterinary Association.

DRS. S. E. BENNETT, R. C. Moore, B. F. Kaupp, F. C. McCurdy, John S. Buckley and S. Stewart went from Kansas City to attend the meeting at St. Joseph, Mo.

DR. E. J. NETHERTON, of St. Joseph, Mo., has recently established a veterinary infirmary. It is the only one in the city and it is believed will be a profitable venture.

THE IOWA VETERINARY MEDICAL ASSOCIATION holds its annual meeting January 10th and 11th, and Secretary Brown writes that he looks forward to a splendid meeting.

DR. ALBERT LONG, of Lewiston, Me., and Dr. H. D. Fenimore, of Knoxville, Tenn., were recently appointed as inspectors in the Bureau of Animal Industry and assigned to Kansas City for duty.

THE MISSOURI STATE VETERINARY MEDICAL ASSOCIATION held its annual meeting at Sedalia, Mo., Dec. 28th. The subject of veterinary legislation was the principal theme of discussion.

OSCAR VERSCHULDEN, a member of the Missouri Valley Veterinary Association, has recently returned from a trip to Europe. In far-away Belgium Dr. Verschelden was married to an estimable young lady. May prosperity and happiness reward them.

DR. HANSON'S BOOK, "Practice of Equine Medicine," is about ready for delivery to those who have ordered it in advance. We will review it in the February issue. His advertisement contains some flattering notices from those who have read the advance sheets.

DR. C. H. ZINK, an Inspector of the Bureau of Animal Industry, who had been in Kansas City about four weeks familiarizing himself with the details of microscopic inspection and supervision of pork products, has been placed in charge of station at Buffalo.

DR. ROBT. ROBB, who is engaged in the practice of human medicine at Littleton, Iowa, took the last Civil Service examination for inspector in the B. A. I. Dr. Robb was formerly a

veterina
the cras

DR.
Iowa, fo
worth M
human
formerly

THE
TION is
inspecti
delibera
appeals
fitable o

ALU
been iss
Medicin
Februar
of the a
Those o

VIRO
the Virg
quaranti
Richmo
arranger
stroying
dustry.

veterina
burg, w

DR.
of the
cember
public-s
is to be
they ha
tive ser
professi
the pro
present

Gov
Govern
Dr. D. M
the fisca
abattoir

veterinarian at Terre Haute, Ind., but gave up practice when the crash in horses came, and studied human medicine.

DR. JAMES HANSEN, who has been located at Clounda, Iowa, for the past seven years, is a senior student at the Ensworth Medical College, of St. Joseph, Mo. He will engage in human practice as soon as graduated. Dr. T. W. Watson formerly of Marshalltown, Iowa, succeeds to his practice.

THE MISSOURI VALLEY VETERINARY MEDICAL ASSOCIATION is composed almost exclusively of members of the meat inspection service of the Bureau of Animal Industry, and its deliberations are confined almost wholly to the subject which appeals practically to them. The late meeting was a very profitable one.

ALUMNI ASSOCIATION MCGILL UNIVERSITY.—A call has been issued to the graduates of the Faculty of Comparative Medicine of McGill University to assemble at the college in February for the purpose of reunion and to form an association of the alumni practicing in Canada and the United States. Those of Massachusetts have long had such an organization.

VIRGINIA CATTLE QUARANTINE.—The Board of Control of the Virginia Experiment Station, which regulates the cattle quarantine, has decided to establish a union stock yards at Richmond, with a branch station at Norfolk, at each of which arrangements will be made for dipping cattle in the tick-destrorying solution recommended by the Bureau of Animal Industry. Among the members of the Board are mentioned veterinarians E. P. Niles and Charles McCulloch, of Blacksburg, who are State veterinarians.

DR. W. J. MARTIN, of Kankakee, Ill., was elected President of the Illinois State Veterinary Medical Association at its December meeting. Dr. Martin is one of the most energetic and public-spirited veterinarians in the country, and the association is to be congratulated upon its choice, for in honoring the man they have doubly honored themselves, and have secured the active services of one whose every aspiration is the good of the profession. Already he enters upon his work by appealing to the profession of his State to rally for legislative work at the present session.

GOVERNMENT MEAT INSPECTION.—The latest figures on Government meat inspection are just submitted in the report of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, for the fiscal year. Meat inspection has been in operation at 135 abattoirs, as against 128 for the previous year, and in thirty-five

cities as against thirty-three in 1897. The number of animals inspected before slaughter numbered 51,335,398. Of these 9,228,273 were cattle, 10,028,287 were sheep, 468,199 calves, and 31,610,675 hogs, showing a total gain over 1897 of 9,025,291 animals. At the time of slaughter 31,116,833 animals were inspected and 63,662 were rejected; 91,508 carcasses and 48,189 parts of carcasses were condemned. The meat-inspection stamp was affixed to 14,583,780 packages of mutton and beef and pork products, of which 374,131 contained microscopically-examined pork.

GREAT BRITAIN TO FIGHT TUBERCULOSIS—PRINCE OF WALES PRESIDES AT A MEETING TO PROMOTE WAR AGAINST IT.—A despatch from London, dated Dec. 20th, says: "The Prince of Wales presided at a private meeting at Marlborough House to-day, convened by him to promote a war against tuberculosis. The Marquis of Salisbury, the Earl of Rosebery and a number of noted scientists and physicians spoke of the urgent necessity of educating the people in the means of preventing consumption and of checking the spread of tuberculous diseases among cattle. Special stress was laid upon the importance of erecting open air sanatoria. The Prince of Wales, who promised his heartiest support to the movement, said Great Britain ought to follow the great example set before her in the United States, Germany and elsewhere in the effort to stamp out the disease. He mentioned the fact that the Queen had ordered the destruction of thirty-six of her dairy cows which had been found tuberculous. It was an example, he urged, such as the farmers ought to follow."

PRACTICE FOR SALE.

In city of 75,000; only one graduate to compete with. Instruments, dental tools, horse and buggy and everything connected with the business. An established practice of twenty-five years. Address, M. C., care of REVIEW.

SECRETARIES OF V. M. ASSOCIATIONS

Can make money for themselves and do much good to their profession by getting up Subscription Clubs for the REVIEW. Write us for club rates and full information.

BACK NUMBERS REVIEW FOR SALE.

Volumes 2, 4, 8, 9, complete); April, '79, '81, '82, '83; May, '79, '81; June, '79, '81; July, '79, '81; August, '79, '81, '83; September, '79, '81, '83; October, '79, '81; November, '79, '81, '83; December, '81, '82, '83; January, '80, '82, '83, '84; February, '80, '83, '84; March, '83, '84.

Apply C. E. C., 141 West 54th street, New York City.

AMER

All commun
Roscoe R. Bel

SEVEN
have on ot
which is to
tempted to
the import
great inter
have receiv
last progra
presented,
will be I
France, Ho
den, Italy
the many a
erinary me

At this
resented, b
been given

From a
practitione
stain from
contributin
gramme re
SEVENTH IN

The follo